

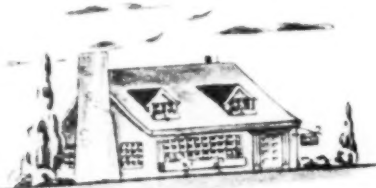
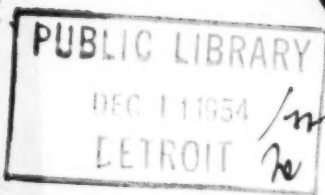
TECHNOLOGY DEPT.



The

Manufacturing Confectioner

ONEER SPECIALIZED PUBLICATION FOR CONFECTIONERY MANUFACTURERS



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**DECEMBER
1954**

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in
half!



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Latini Die Pop Machine With Continuous Wrapping Attachment

You can now make and wrap pops in a continuous operation—and they're not just pops—they're **LATINI DIE POPS**.

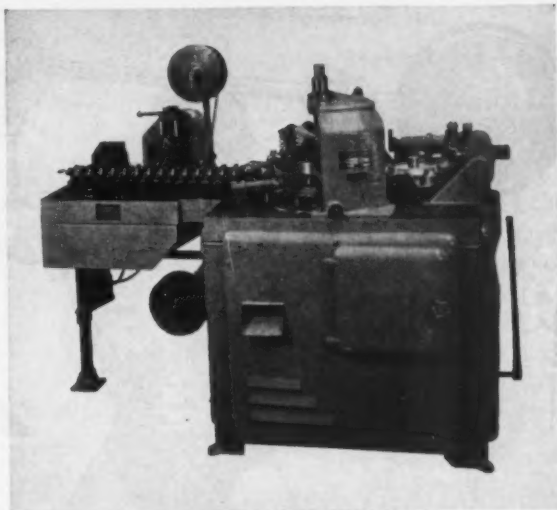
200 wrapped Die Pops per minute require only one operator: the spinner.

The wrapped pops go right through for cooling, then packing.

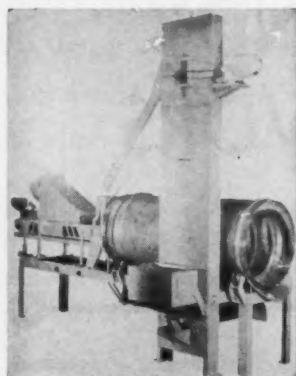
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In addition, the sandwich wrap saves cellophane—uses about 50% of other type wraps.

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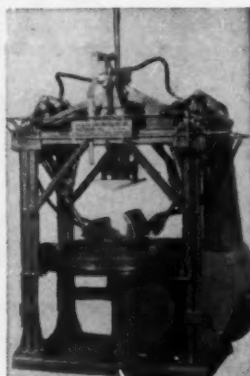


Latini Die Pop Machine
With Continuous Wrapping Attachment



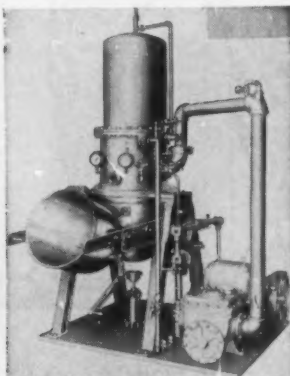
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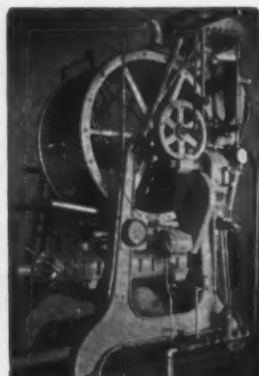
Berks Hard Candy Batch Mixer

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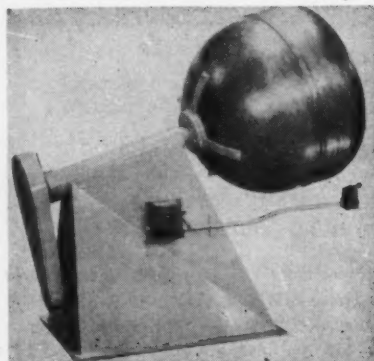
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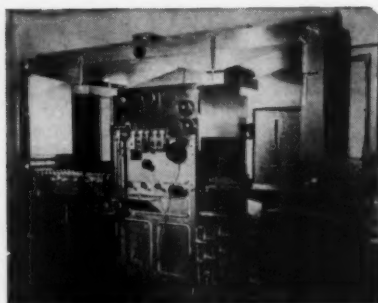
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The *Manufacturing* *Confectioner*

Vol. XXXIV No. 12
December 1954



Edited and Published in Chicago
The Candy Manufacturing Center of the World



Viscosity in the Chocolate Industry.....	J. Kleinert	19
Some Current Legal Problems of the Food Technologist	A. I. Kegan	31
Mrs. Mangus Candy Cottage.....		55
Cransweets — A New Candy Ingredient.....	Stan Allured	61
1955 Editorial Index.....		65
Publisher's Page	6	Calendar
Candy Packaging	27	Candy Clinic
What's New	38	Classified Advertising.....
Confectioner's Briefs	39	Brokers
New Packages.....	40	Advertisers' Index.....
		70

COVER: This is the promotion band provided for new candies with Cransweets, the whole preserved cranberry. The full story on this exciting new ingredient is on page 61.

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*by Frank Buese and
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From the Desk of the Publisher

Mirror, mirror on the wall
Who's the fairest one of all?

We look in a mirror to see ourselves as others see us. At times the view may be disconcerting and far from flattering, but the image reflected is honest and truthful. Mirrors do not lie.

How can a magazine evaluate itself? Can it, too, use a mirror? Yes—such a mirror exists. It is the opinion reflected from subscribers and readers.

A subscriber wrote, Who wrote up the NCA Convention (p. 54, July)? He did a swell job! A compliment such as that is more than pleasing: the MC Staff prides itself on its reportorial ability.

*However, even a competent staff is insufficient. Editorial content exclusively Staff-written reflects the viewpoints of only a few individuals. That is why we present ideas from many sources. This year, **THE MANUFACTURING CONFECTIONER** lists over 30 contributors. This makes for variety—the spice of life, and of a publication.*

The pages of the MC have known some writers for as long as 25 years; they have also carried the first articles of newcomers. Thus a balance is maintained between the Old-Timers who have the Know-How and the Neophytes familiar with the latest technology.

The mirror reflects our broad editorial policy. We impose no restrictions as to style; we merely ask that articles be informative and of benefit to the industry. Although we have blue pencils, these are rarely used: a writer may tell his thoughts in his own words. Also, our pages are always open to those who may disagree with the thoughts expressed.

Another measure of a publication's service to its industry is the amount of specialized books it publishes. The confectionery industry is not large enough in terms of potential sales to interest large book publishers. We are proud of the five books that we have published, by such outstanding men as Robert Whymper, Stroud Jordan, Walter Richmond and Alfred Leighton. In addition to these books, we have published a number of booklets on specialized subjects for this industry. During this year, over 20,000 reprints of articles published in the MC have been circulated by various candy firms, suppliers and by ourselves. This all adds up to creative editorial service to the industry, the highest function of a business publication.

*The mirror has still another facet. Some magazines find it expedient to publish popular, light articles of meager basic value. **THE MANUFACTURING CONFECTIONER** presents articles designed to stimulate thinking—inducing the reader to expand his creative talents and thereby progress. Hence, the MC is not afraid of controversial material.*

You will find the Index of Volume XXXIV on another page in this issue. This index is a mirror, reflecting the many articles and features brought to you during the year.

We believe our reflection in the mirror is good, though far from our ideal of a perfect magazine. We shall continue striving for improvement in 1955, and hope that the mirror of 1955 shows an even better reflection.

P. W. Allured
Publisher

Mr. Richmond's first book, Candy Production, Methods and Formulas, is the most informative and up-to-date reference for the wholesale candy manufacturer. This book, published five years ago and now almost out of print, was the most successful book ever published for the candy manufacturer.

Choice Confections

by Walter Richmond

Choice Confections fills a long felt need for a book written primarily for the manufacturing retailer. The 365 formulas are given in two batch sizes, one for hand work, and one for machine work. There are separate instructions for working each sized batch, with suggestions as to the methods of coloring and flavoring for variety. A glossary is included, both of candy terms and chemical terms that candy men are apt to run into. All of the formulas are cross indexed for ready reference, and are grouped in chapters for convenience. A complete chapter is presented on chocolate, giving the information that is necessary to have in order to buy coatings intelligently and use them to the best advantage.

All manufacturing retailers will welcome this book as an indispensable tool in varying old formulas and developing new ones. All 365 formulas have been production tested and are proven sellers.

Mr. Richmond is at present director of quality control at Norriss Candy Company in Atlanta, Georgia. During the past forty years he has worked in some of the largest and finest candy plants in this country, both wholesale and retail. His experience is available to every retail candy plant in the world for only \$10.00.

Order your copy now. It will be shipped as soon as it is published, in about one month.

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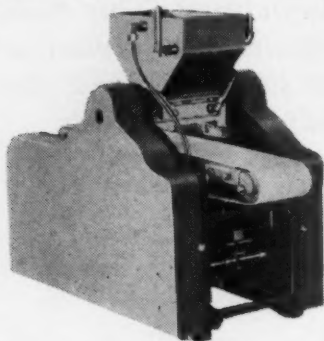
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CONTENTS

Ingredients and The Uses
Types of Candies
Hand Rolled Creams
Chocolate Coated Cast Creams
Cordial Fruits
Cream Coated Bon Bons and
Wafers
Almond Paste—Walnut Paste
—Filbert Paste
Glazed Butter Goods
Easter Eggs
Coconut Candies
Fudge
Caramels
Marshmallow
Nougat
Sea Foam or Divinity
Icing
Pure Fruit, Pectin and Agar
Jellies
Starch Jellies and Turkish
Paste
French Chocolate, Puddings
and Plastic Chocolate
Hard Candies
Taffy and Kisses
Butterscotch
Almond Butter Crunch
or Toffee
Sugar Toasted or Burnt
Peanuts
Popcorn in Confections
Egg Frappè
Salted Nuts
Chocolate Coating Methods
Useful Information
Glossary

DEPOSITOR MEETS ALL FORMING NEEDS

Illustrated is the Racine Depositor featuring interchangeable shafts and plates for various spacing to handle

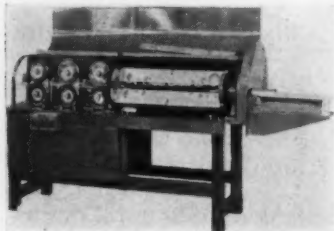


chocolate, creams, marshmallows, etc., with or without fruits or nuts, for depositing into molds, paper cups, or trays, plaques or belts. Important advantage of the machine is the absolute uniformity of the product as to size and weight. Now in four models, Jumbo 48", Senior 32", Junior 16", Baby 6". Complete details may be obtained from Racine Confectioners' Machinery Co., 15 Park Row, New York 38, N. Y.

STICK CANDY MACHINE TURNS OUT 100 TO 300 STICKS A MINUTE

The Racine Confectioners' Machinery Co. is producing a machine which will handle solid sticks, clear or pulled, as well as sticks with honey-combed centers. Called the Racine Stick Candy Machine, it sizes, twists, and cuts the sticks of any diameter and length.

Requiring only one operator to feed the machine from a batch roller or flat board, the machine sizes, twists and cuts automatically.



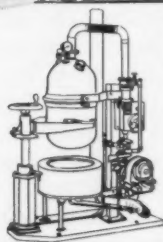
The operating speed is controlled by a variable speed transmission. Capacity is from 300 to 900 inches per minute. It can turn out 300 one-inch sticks or 100 nine-inch sticks per minute.

Complete information is available from Racine Confectioners' Machinery Co., 15 Park Row, New York 38, N. Y.

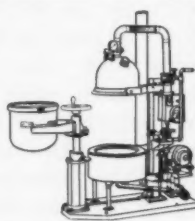
NEW SIMPLEX MODEL H-1 GAS VACUUM COOKER



Hydraulic lift raises kettle. A turn of the handwheel locks kettle in perfect vacuum position.



Arm swings out. Kettle can be tilted or removed. Batch removal is greatly simplified.



Never before has handling batches been so easy! Imagine, only one man is all it takes to handle the complete operation including raising the kettle to vacuum position and removing the batch. That's because the Simplex Model H-1 eliminates the hard work with the exclusive hydraulic lift and mechanical kettle tilter. Saves on labor — makes working conditions much easier!

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dies, and fondants. Batches from 25 to 120 pounds are handled with ease — production can be as high as 3,000 pounds or more a day. Quicker cooling lets you increase production too.

If you make fruit drops, stick candies, lolly pops, other hard candies, or taffies, fondants and others, and don't have steam available, it will pay you to investigate the Simplex Model H-1 — the only gas vacuum cooker on the market with so many labor saving, high production features. Write for the complete details today.

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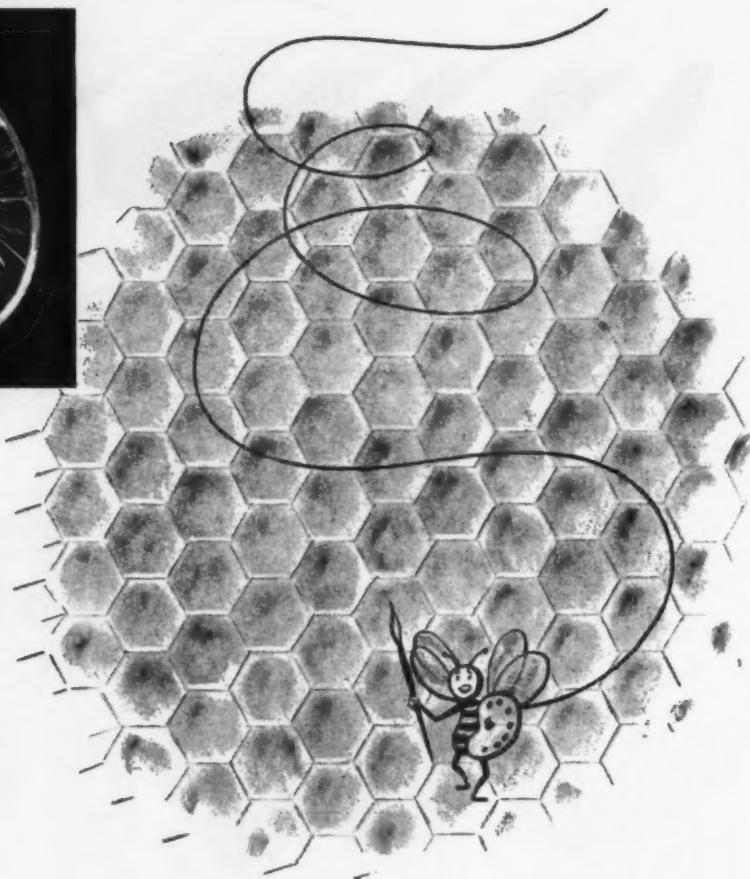
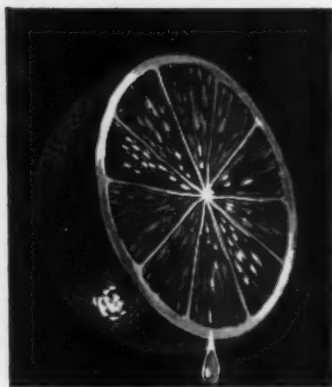


**Here is one way to get strawberry flavor
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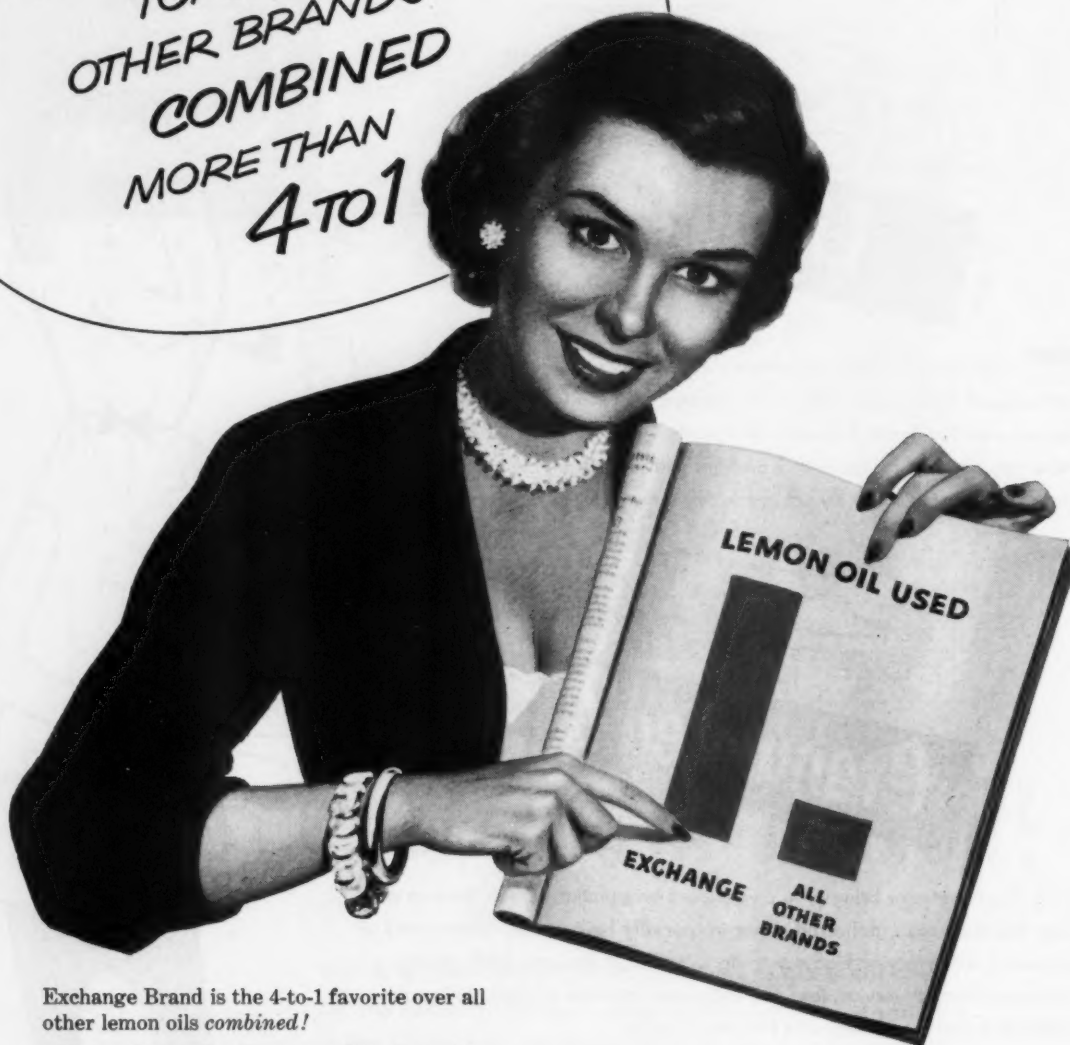
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by *Walter Richmond*

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How to Salvage Scrap Candy

by *Wesley H. Childs*

This booklet is a complete revision of the author's work "Modern Methods of Candy Scrap Recovery" published in 1943. A considerable amount of information has been collected since that time on methods and techniques of salvaging scrap candy. This booklet covers all types of candy, and gives many practical and economical ways of converting scrap candy into a useful form for re-use.

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by *Alfred E. Leighton*

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☐ Choice Confections

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☐ A Textbook on Candy Making

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☐ Profits Through Cost Control

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Here's your formula

Part I

24 ounces Egg Albumen
21 pounds Corn Syrup
3 quarts Water

Dissolve egg in water. Heat corn syrup to liquid and add to egg that is whipping in mixer.

Part II

60 pounds Granulated Sugar
21 pounds Corn Syrup
15 pounds Seedless Raisins
15 pounds Diced Glaced Pineapple
15 pounds Diced Glaced Cherries
25 pounds Whole and broken Almonds or Sheller Run
1½ pounds Coco Oil

Cook sugar and corn syrup to 256 degrees. Remove from heat, pour part I into part II. Mix well. Add coco oil. Mix well. Add raisins, cherries, pineapple, and almonds. Mix in thoroughly. Pour on wax lined table. Let set and cut to desired size. May be cellophane wrapped or chocolate coated.

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and a
Bright New Year



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This article challenges the traditional method of expressing chocolate viscosity, by the one-determination method. The author shows that, since chocolate is a non-Newtonian liquid and has structural viscosity, its viscosity cannot be measured by a determination at a single shear rate. This view should be of a great deal of interest to purchasers of coatings, both chocolate and compound, to enable them to more accurately predict their behavior in coating and molding machinery.

Viscosity in the Chocolate Industry

by DR. J. KLEINERT, *Lindt & Sprungli A. G., Switzerland*

Introduction

In present-day industry we are continually trying to rationalize manufacturing processes as far as possible. This requires a considerable measure of automatic control. More and more servo-mechanisms and recorders are therefore being built into production lines which regulate the process and give continuous information on temperature, pressure, pH, etc.

Apart from the factors already mentioned (temperature, pressure, pH), viscosity is of considerable importance, especially when dealing with physico-chemical processes such as are often found in the food industry. Viscosity measurements are becoming steadily more important as an aid to the control of production lines owing to the improvement in viscometers which are combined with recorders and servo-mechanisms. Reliable and objective measurements are particularly important in the chocolate industry which is using viscosity more and more as an indication of quality. Thus we come to the problem of whether several or only one determination has to be made. It is proposed to show below that several determinations are necessary when dealing with chocolate.

Before going into that in detail, however, we must state clearly a few basic principles. There is, unfortunately, not enough time to go in detail into the derivation of the various formulae.

Basic principles of viscosity.

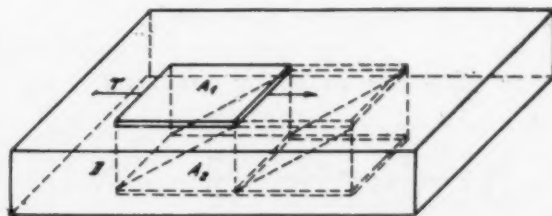
According to Maxwell¹ viscosity is defined as follows:

Given a system consisting of two plates of known distance apart in one plane with a substance between them, then viscosity is the tangential force needed to displace one of the plates with constant speed.

Say the area of plate A_1 and A_2 in Figure 1 is 1 cm^2 , the liquid layer between them (D) is 1 cm and the force P required to displace plate A_1 at a constant speed of 1 cm/second is 1 dyne , then the viscosity of the liquid is 1 poise .

Thin skins of liquid stick to both plates by adhesion. Between these there are further layers of

Figure 1
Schematic View of Viscosity



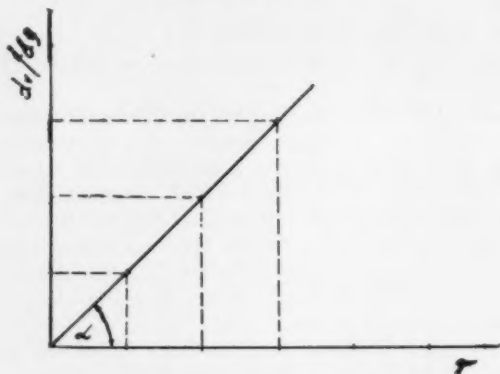
liquid which slide past one another when Plate A₁ is displaced.

Now if plate A₁ is moved to the right, then the layer of liquid adhering to the static plate A₂ also remains at rest. Layers above move to the right with a speed which increases proportionately with the distance from A₂. Each layer of the substance therefore moves a little faster than the one immediately below, and more slowly than the one immediately above. Since the layers of the substance will adhere to a greater or less extent there will be a force counteracting this movement. This force is called the viscosity or internal friction of the system. The viscosity therefore is a measure of the combined effect of adhesion and cohesion. The force P transmitted during this gliding process is therefore proportional to the coefficient of internal friction (viscosity). Therefore we have:

$$P = \eta \frac{dv}{dy} \quad (1)$$

The differential coefficient $\frac{dv}{dy}$ is called the velocity gradient. Equation 1 indicates that the shear-stress P is proportional to the velocity gradient $\frac{dv}{dy}$ as shown on the Rheogram on Figure 2. The viscosity of a substance is therefore given by the relation of the shear-stress T and the velocity gradient (D).

Figure 2
Simple Rheogram



Legend:

T , = Shear-stress in dyn/cm²

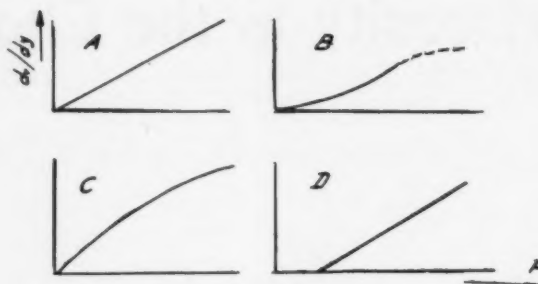
$\frac{dv}{dy} = D = \text{Velocity Gradient}$

$$\eta = \frac{P}{dv/dy} = \frac{P}{D} = \frac{T}{D} \quad (2)$$

The resulting dimension is also called the total viscosity since it consists of the quotient of the total shear-stress and the total velocity gradient. If the velocity is constant, the result is a straight line as shown on Figure 2.

This is only true, however, for fluids in molecular dispersion, i.e., real liquids which begin to flow at the least pressure. Apart from this Newtonian type of flow, other types have been observed in colloidal or coarsely dispersed systems. On Figure 3 some characteristic Rheograms are shown and it will be seen that the resultant of velocity gradient and shear-stress can be steeper or less steep than the straight line.

Figure 3
Some Typical Rheograms



Types of Flow

Newtonian Liquids

As has been mentioned, it is characteristic of this group that the shear-stress (T) is proportional to the velocity gradient (D) and that flow takes place at the slightest pressure. The characteristic flow curve for a Newtonian liquid goes through the origin as shown in Figure 3a.

Pseudo-plastic substances or ones having structural viscosity.

As shown on Figure 3b the slope of the curve for these becomes steeper than the straight line with increasing shear-stress. Flow here results in an orientation of the molecules and this reduces the viscosity of such a system. According to Ostwald^{2,2b} such substances are referred to as having structural viscosity which indicates that during flow they undergo a structural alteration. The size and concentration of the molecules is supposed to have no further effect on the viscosity once this orientation has taken place. However, owing to the close correlation between the velocity gradient D and the shear-stress T any alteration in the former causes an alteration in the later.

With increasing velocity gradient there is an increasing orientation of the so-called chain molecules. This reduces the internal friction as is clearly shown by the lower viscosity values. On a return to a lower velocity gradient the molecules again become only partly orientated and the viscosity rises once more.

If in a system having structural viscosity several

series of viscosity determinations are made at increasing and decreasing angular velocities, then viscosities for the same velocity always agree whether in the ascending or in the descending series, i.e., they are reproducible unlike those shown by thixotropic substances.

No time factor is therefore involved in the measurement of system with structural viscosity. Furthermore one is dealing with a reversible reaction and the molecules disorientate themselves as soon as the shear-stress is removed. If the latter is too high, however, then the laminar flow is replaced by a turbulence which increases the viscosity. This is shown in the dotted part of the line on Figure 3B.

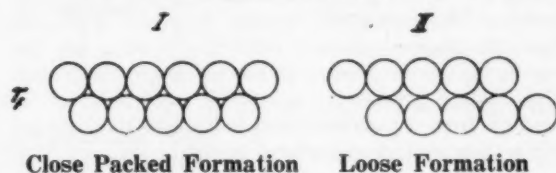
Plastic Substances (Bingham Bodies)

Bodies of this type show no flow at all under normal circumstances and behave as if they were solid. It is characteristic of these substances, they require a certain shear-stress before flow takes place. When this point of flow or yield value is exceeded they behave like liquids (Figure 3D).

The yield value is the force necessary to lift the solid particles of a system out of their close packed position. The principle is indicated diagrammatically on Figure 4.

Figure 4

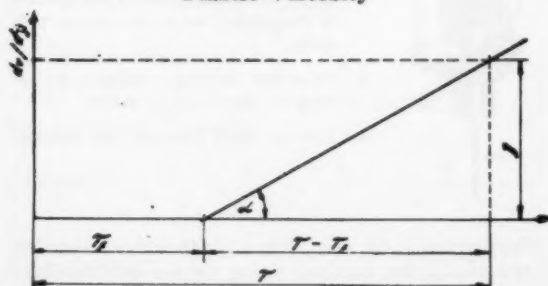
Diagrammatic representation of the structure in a plastic system



In order to calculate the viscosity of plastic substances the two forms of friction must be clearly differentiated. The true viscosity is shear-stress over velocity gradient $\frac{T}{D}$ and is therefore equal to the cotangent. In order to calculate the plastic viscosity the partial shear-stress (T_f) necessary to reach the yield value, must be subtracted from the total shear-stress (T) as shown on the Rheogram Figure 5.

Figure 5

Graphic representation of Field Value and Plastic Viscosity



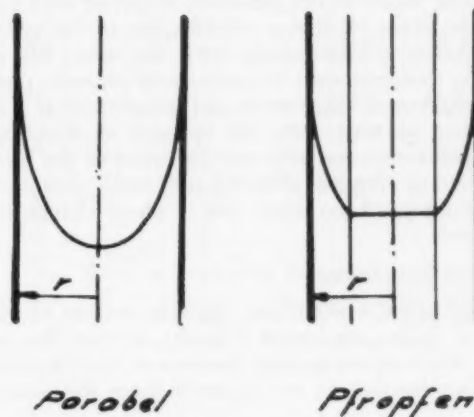
From Figure 5 we get:

$$\eta = \frac{T - T_f}{D}$$

The value of T_f should be given in dynes/cm². Once the yield value has been passed, systems of this sort behave like pure Newtonian liquid. Both yield value and plastic viscosity are therefore necessary to define them completely (Figure 3D and 5). When flowing through capillaries these plastic substances or Bingham bodies can be recognized since their surface is not in the form of a parabola but in that of a stopper instead (Figure 6).

Figure 6

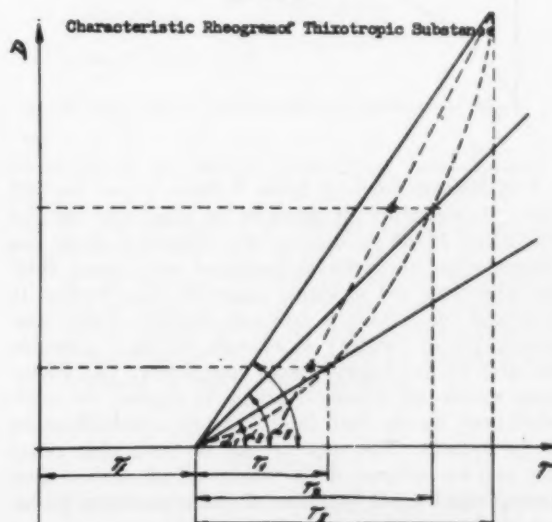
Flow profile of Newtonian and Plastic Substances



According to Buckingham³ flow only takes place over the whole radius r of the capillary if an infinitely high pressure is applied, i.e., never in practice. Thixotropy

It is characteristic for a thixotropic substance that different values are found when a number of viscosity

Figure 7



determinations is made in an ascending series of angular velocities than when these are made in a descending series. Thixotropy is always shown when some time is required for the substance to relax back into its original state. Owing to this dependence on time Hysteresic loops are formed instead of simple curves as shown on Figure 7.

This phenomenon is due to the collapse of forces which act between the various components of such a system. For the sake of completeness it should be mentioned that there are cases of thixotropy where the destruction of structures is reversible as well as irreversible, for instance in Joghurt.

Shear Hardening

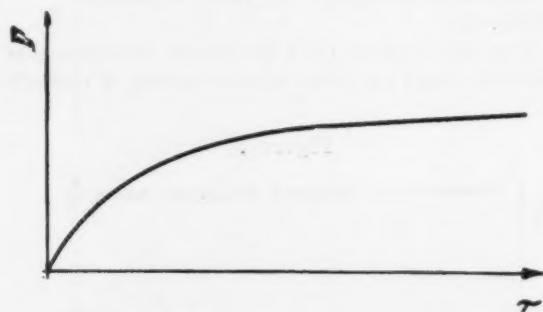
Shear hardening is an increase of viscosity with increasing shear-stress as is found for instance when whipping cream or egg albumen. It can be seen from the Rheogram 3C that a solidification of the system takes place simultaneously with the flow. We are dealing therefore with an increase in viscosity under the influence of shear-stress and, since there is a dependence on time, with the opposite of thixotropy. Whipped cream for instance will revert to the liquid state and the original viscosity after some time unless it was whipped too much and a phase change had occurred.

Dilatant Substances

These show a behaviour opposite to that of substances having structural viscosity in that the viscosity rises with increasing shear-stress. Sand typically behaves like this as we all know from the seaside.

Characteristic Behavior of Dilatant Substance

Figure 8



A system of this sort flows if there is just enough water to surround all granules of sand and fill the interstices. If the particles of the dispersed phase are pushed apart under the influence of some force, then the interstices are suddenly enlarged. The friction is increased since there is now not enough of the continuous phase (water) to enclose all sand granules and also fill the empty spaces completely. The Rheogram shown on Figure 8 which is typical for such substances shows that this leads to a solidification of the system. The process can be reversible since flow can be restored if the dispersed phase becomes close packed again or more of the continuous phase is added.

Viscometers

A large variety of instruments has been developed in the course of time for the measurement of viscosity. Very broadly they can be divided into two main groups: those measuring time and those measuring force. I will not go into a description of the various instruments since, apart from a few new developments such as the ultrasonic viscometer of the Bendix Corporation, this has been done by Dr. H. Umstaetter in his book "Die Einfuehrung in Die Viskemetrie Und Rheologic."

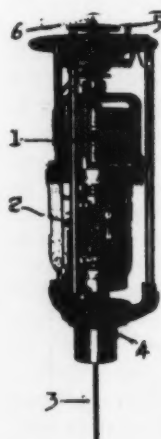
Our measurements were made with the structural viscosity developed by Epprecht⁴. It consists of a rotation viscometer capable of working at three different speeds and is therefore particularly useful for measuring systems having structural viscosity.

The Epprecht Viscometer

A synchronous motor is fixed into the casing as shown on Figure 9, in such a manner that it can be rotated very easily about its own axis. By means of a shaft (3) this is used to drive a measuring device. The latter dips into the substance to be measured and is exchangeable. The friction on the measuring device is large or small according to the viscosity of the material under test. The friction is related linearly to the viscosity and is transmitted to the rotatable motor. The resulting Torque is taken up by a precision spring (5) which is calibrated according to the C.G.S. System. The measuring system therefore is moved from its position of rest until the friction on the measuring device is equal to the tension in the spring. The friction produced (viscosity) can therefore be read off from a pointer which is fixed to the measuring system and moves over a scale.

Figure 9

Epprecht Viscometer without Outer Casing



1. Synchronous motor, fixed to rotate very easily.
2. Gearbox for speeds of 20.48, 64.0 and 200.0 revs/min.
3. Shaft for fixing measuring devices by means of ball joint coupling.
4. Cage in which measuring system is suspended so as to rotate very easily.
5. Precision spring, calibrated according to C.G.S. system.
6. End of shaft bearing the pointer.

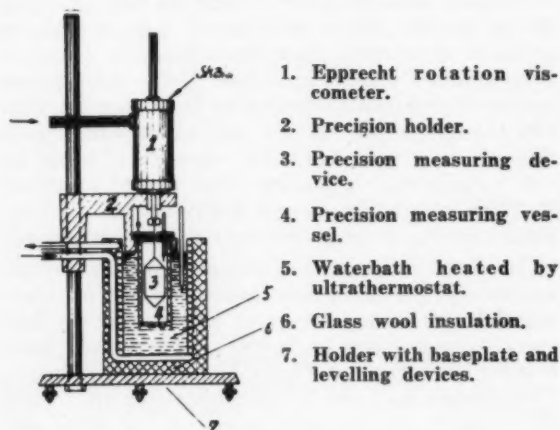
Measurement of the viscosity therefore consists simply of dipping the measuring device into the substance under test and reading off the position of the

pointer. Since the measuring systems can be exchanged, viscosities from 0.5-30.000 centipoises can be measured with one instrument. A frequency modulator producing, say, 30 and 80 cycles can be put into the circuit. If the normal mains frequency is .50 cycles this will give 9 instead of 3 points on the graph which should be sufficient for all purposes. If the schematic diagram (Figure 1) is compared with the Epprecht system of measurement (Figure 10) it will be seen that the same principles apply to both. Planes A_1 and A_2 become cylinders and the substance to be measured is between them. Rotation of the inner cylinder produces a velocity gradient just as a movement of plane A_1 in Figure 1.

The temperature factor is of great importance for the accuracy of rheological measurements. A special thermostat is therefore used as shown on Figure 10. The measuring system can be immersed completely into the bath of the thermostat. The vessel also has a lid to reduce surface heat losses to a minimum.

Figure 10

Epprecht Viscometer with measuring system immersed in bath of thermostat



Calculation of Viscosity

The viscosity can be calculated fairly easily from the pointer reading of the Epprecht viscometer since the constants of the apparatus and measuring system are known.

As has been briefly stated above, viscosity (η) is the quotient of shear-stress (T) and velocity gradient (D).

$$\eta = \frac{T}{D}$$

The values of T and D can be worked out from the following formulae:

Formula I
$$T = \frac{M}{2\pi r^2 L'}$$

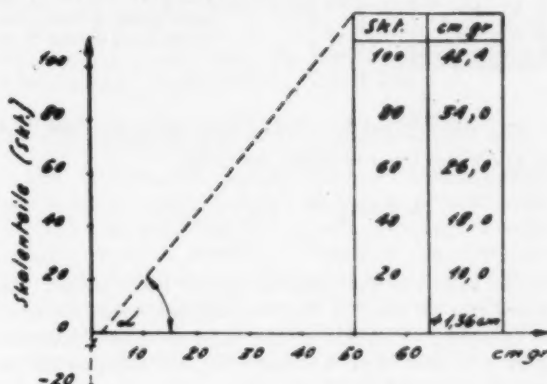
Formula II
$$D = \frac{2\omega R^2}{R^2 - r^2}$$

The various symbols are

M = Turning moment in cm dynes (is proportional to the pointer reading). For the measuring system MK/C of the Epprecht Viscometer, the Torque (M) is calculated as shown on Figure 11.

Figure 11

Graph of the Torque M



Data for measuring device MK/C

Diameter	= 1.36 cm	Turning Moment (M)	
Radius (r)	= 8.68 cm		= 0.404 cm grs.
Length (L_1)	= 4.59 cm	T/Scale Division (K_1)	= 27.4
Length (L_2)	= 8.665 cm	Spring pre-set to (K_2)	
Length' (L')	= 4.989 cm		= 5.0 scale division

From Figure 11 we can see that 105 divisions on the scale correspond to 42.4 cm grs. This gives a Torque (M) per division of

$$M = \frac{42.4}{105} = 0.404 \text{ cm grs} \quad \text{or}$$

$$0.404 \times 981 \text{ dynes} = 396.32 \text{ cm dynes}$$

Therefore for the measuring system MK/C we get a value of T for each division.

$$T = \frac{M}{2\pi r^2 L} = \frac{396.324}{14.488} = 27.4$$

The general formula is:

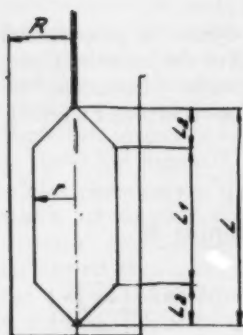
$$T = K_1 (\text{pointer reading} + K_2)$$

where K_2 is the value given by $\frac{M}{2\pi r^2 L'}$

and K_2 the amount to which the spring is pre-set. L' = the "hypothetical length" of the measuring device used. These devices are usually cylindrical. In order to cut out the disturbing end effects of this shape, the device here used is pointed at both ends, i.e. there is a cone on both terminal surfaces as shown on Figure 12.

Figure 12

Diagram of the Measuring Device of the Epprecht Viscometer



- R = internal radius of the measuring vessel
 r = radius of the measuring device
 L_1 = length of cylinder
 L_2 = height of terminal cone
 L = total length ($L_1 + L_2$)
 W = angular velocity of measuring device (No. of revs. per second $\times 2$)

The total length of a measuring device of this sort is given by the following formula:

$$L = L_1 + L_2 \quad (3)$$

The radius of the cylindrical part is r . Further, the cones can be divided into an infinitely small number of cylinders of length dx the radii of which decrease from r to zero over the length L_2 . By integration we get the torque M_K of the cone.

$$M_K = \int_0^{L_2} dM$$

If the torque (M_K) of the cone is compared with that (M_2) of a cylinder of length L_2 , then from the relationship of M_K to M_2 we can calculate the factor by which the length L_2 of the cone must be multiplied, in order to get the length X of a cylinder having the same effect as the cone and the same radius as the base of the latter. According to Gabler (5) the calculation for various radii of measuring device (r) and vessel (R) showed that X is approximately $0.3 \times L_2$ if the gap between the two is small. For a gap of infinite width the factor is supposed to converge to 0.33. Exact calculations gave a correcting factor of 0.3 for the Epprecht system which was found accurate enough in practice. The corrected formula (3) is therefore:

$$L' = L_1 + 0.6 \times L_2 \quad (4)$$

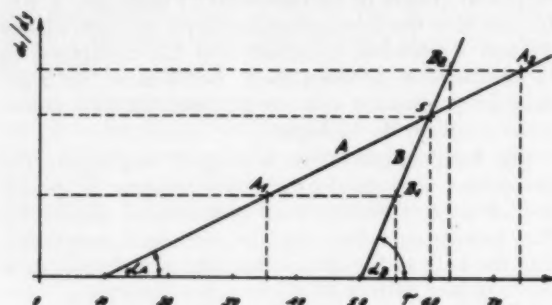
One or Several Determinations?

According to Green ⁶ one determination is sufficient only when the substance under test has a pure viscous flow, i.e., when dealing with a pure Newtonian liquid which has a rheogram consisting of a straight line going through the origin. This is true for molecularly dispersed liquids which show proportionality between the shear-stress (T) and the velocity gradient (dv/dy) (see Figure 2 and 3A). In all other fluid systems the viscosity cannot be determined by one determination since it is a function of the velocity gradient. In order to define substances of this sort completely, viscosities must be determined at various

velocity gradients. To obtain a Rheogram at least two points are necessary as can be seen from Figure 13.

Figure 13

Two Rheograms having the same shear-stress and velocity gradient at the point S



The substances A and B have the same velocity gradient dv/dy at a shear-stress of 60 units. The quotient T/D therefore gives the same viscosity for both products. When, however, the measurement is done at a higher or lower shear-stress, then the substances A and B have different velocity gradients. If the three points for each substance are joined as on Figure 13, then two rheograms are formed, neither of which goes through the origin. Since the viscosity is given by $\cot. \alpha$, substance A has five times that of substance B. The necessity for several determinations on substances having structural viscosity is therefore proved.

Chocolate and couverture are not Newtonian liquids and their properties of flow cannot therefore be determined by measuring one point on an unknown flow curve. Measurements in practice on couvertures show that the Rheograms on Figure 13 are not pure theory. Two couvertures I and II had similar properties when the viscosity was measured once only. At 40° C and values were

Couverture I = 22.55 poises

Couverture II = 22.45 poises

Measurement at varying velocity gradients, however, showed differing properties of flow for the two products as can be seen on Table I and the corresponding Rheograms on Figure 14.

Table I

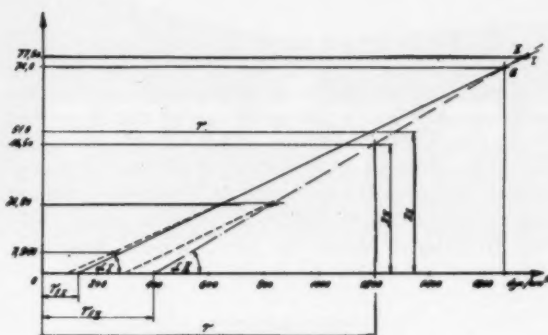
Combined measurements and the apparent viscosity calculated from these for couvertures No. 1 and 2 at 40° C.

Couverture	Measuring System	Temp. in °C	Revs/Min	Scale Divisions	D	T	Apparent Viscosity
I/L	MK/C	40.0°	20.48	4.2	7.94	252.08	31.74 P.
"	"	"	64.00	18.1	24.80	632.94	25.52 "
"	"	"	200.00	58.8	77.50	1748.12	22.55 "
II/S	MK/C	40.0°	20.48	11.7	7.94	457.58	57.63 P.
"	"	"	64.00	25.1	24.80	824.74	33.26 "
"	"	"	200.00	58.5	77.50	1739.90	22.45 "

The different properties of the two couvertures can be seen clearly if values of D are plotted on the y-axis and those of T on the x-axis. At the point G, however, at a shear-stress of 167 dyne/cm² both have the same velocity gradient of 74.00.

Figure 14

Rheograms of Couverture I and II and the corresponding yield values of T_f in dynes/cm²



$$\eta_I = \frac{T - T_{fI}}{D_I} = \frac{1200 - 130}{51} = \frac{1070}{51} = 21 \text{ Poises}$$

$$\eta_{II} = \frac{T - T_{fII}}{D_{II}} = \frac{1200 - 400}{46.5} = \frac{800}{46.5} = 17 \text{ Poises}$$

The fluid properties can also be expressed by the fluidity (v), i.e. the reciprocal of viscosity (η). This too has been calculated for the sake of completeness and is

$$\text{Couverture I} = v = \frac{1}{21} = 0.0477$$

$$\text{Couverture II} = v = \frac{1}{17} = 0.0589$$

Cot. \propto which is also a measure of the viscosity works out as follows:

$$\propto I = \frac{107}{51} = 2.1 = 25^\circ 28'$$

$$\propto II = \frac{80}{46.5} = 1.72 = 30^\circ 10'$$

By plotting the rheogram as in Figure 14 the two couvertures have therefore been accurately defined. On the basis of "apparent viscosity" (Table I) couverture I seems to have more favourable properties of flow since at shear-stress of 20.48 and 60.00 the viscosity is much lower than that of couverture II. The "plastic viscosities" calculated from the rheogram shows the opposite since product II is somewhat more fluid, i.e., its viscosity is 4 poises lower. Apart from that, we can predict that couverture II will give better decorations owing to its higher yield value

($T_f = 67.5$ higher). The higher T_f the more force must be applied in order to make a system flow. When applied to couverture that means that a mass continues to flow only so long as it is acted upon by a force; for instance if we apply a decoration by means of a piping bag, the couverture will retain its shape well after the pressure is released.

With paints the opposite is desirable. Painters prefer values of T_f to be as low as possible so that the brush marks disappear on their own after application and do not leave any undesirable traces.

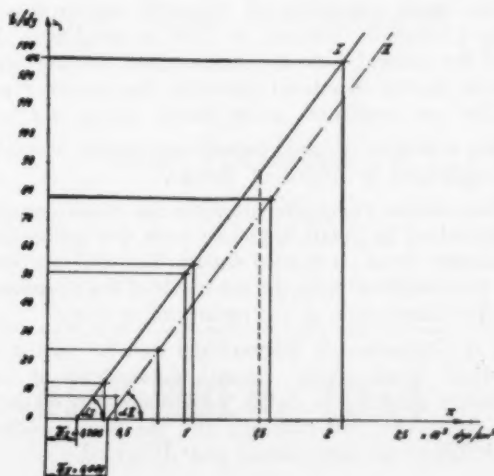
We can summarize by saying that systems with structural viscosity can only be completely defined when several determinations are taken.

Comparative Measurements with Different Viscometers.

The Commission des Experts de l'Office International du Cacao et du Chocolat is at present working on an international project of comparing viscosity measurements of standard substances. The preparation of the samples and the measurements are done in a variety of laboratories in accordance with the general directions of the Office International. So far, unfortunately, only few results have reached the head office and no conclusions can be drawn so far.

Figure 15

Rheograms on one couverture taken at 37.8 C. with the Ferrenti and Epprecht Viscometers and the corresponding yield values (T_f in dynes/cm²)



$$\text{Angle } \alpha \text{ I} = \frac{T - T_f/I}{dv/dy} = \frac{64}{86} = 0.7442 = \underline{53^\circ 20'}$$

$$\text{Angle } \alpha \text{ II} = \frac{T - T_f/II}{dv/dy} = \frac{54}{72.5} = 0.7448 = \underline{53^\circ 19'}$$

$$\text{Viscosity } \eta \text{ I} = \frac{T - T_f/I}{dv/dy} = \frac{1500 - 226}{86} = \underline{14.81 \text{ Poises}}$$

$$\text{Viscosity } \eta \text{ II} = \frac{T - T_f/II}{dv/dy} = \frac{1500 - 440}{72} = \underline{14.72 \text{ Poises}}$$

Measurements done with the Ferrenti Viscometer in England and the Epprecht Viscometer in Switzerland on the same product, gave similar rheograms, but with different yield values (T_f). In spite of that, the plastic viscosities calculated from the rheograms were in good agreement with 14.5 poises for the Ferrenti instrument and 14.72 for the Epprecht one. The difference in yield value is interesting. The cause is not exactly known, but it may be due to the fact that the two systems have different gaps between the rotating and the stationary part.

The measurements obtained with various viscometers can only be compared, if they are brought to a common denominator, the "plastic viscosity." This, however, entails the production of rheograms and several determinations are therefore absolutely necessary in order to define systems having structural viscosity. Both the Epprecht and the Ferrenti viscometers are built to take measurements at three different speeds and therefore with different shear-stresses. They are therefore suitable for taking several determinations.

Summary

By way of introduction it is pointed out that automatic control is being used more and more throughout the whole of industry as processes are becoming rationalized. Viscometry is therefore increasing in importance.

The basic principles of viscosity are explained, using a schematic diagram in order to emphasize the need for several determinations when dealing with systems having structural viscosity. The various types of flow are explained, using simple rheograms.

The concepts of yield value and plastic viscosity are explained by means of graphs.

The rotation viscometer used for the measurements is described in detail, together with the probe and thermostat used. It is also shown how the viscosity can be calculated from the constants of the apparatus and the dimensions of the measuring system.

It is demonstrated theoretically and by means of practical results, why several determinations are necessary in order to define non-Newtonian systems. The rheograms thus obtained and the corresponding yield values are interpreted and discussed.

Some results are given of international comparative measurements which are being carried out at present. Rheograms and yield values obtained with two different viscometers on the same couverture are compared. It was found necessary to obtain a common denominator—the plastic viscosity, in order to compare the two. In order to obtain the latter, several determinations must inevitably be made.

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We hope to report in a few months about some work that is being done in America to develop a viscosity measuring device that will draw a complete rheogram directly while running a viscosity test. An instrument of this kind would give a complete picture of a coating under all possible conditions of use.





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Whether you manufacture food, candy or drugs, you'll find money-saving advantages in packaging with a STOKESWRAP. This versatile machine forms, fills and seals packages of any approved heat-sealing film, paper, or foil. It takes the printed or unprinted web from the roll—single, double or laminated—at speeds up to 6,000 per hour depending on material, web and size of package.

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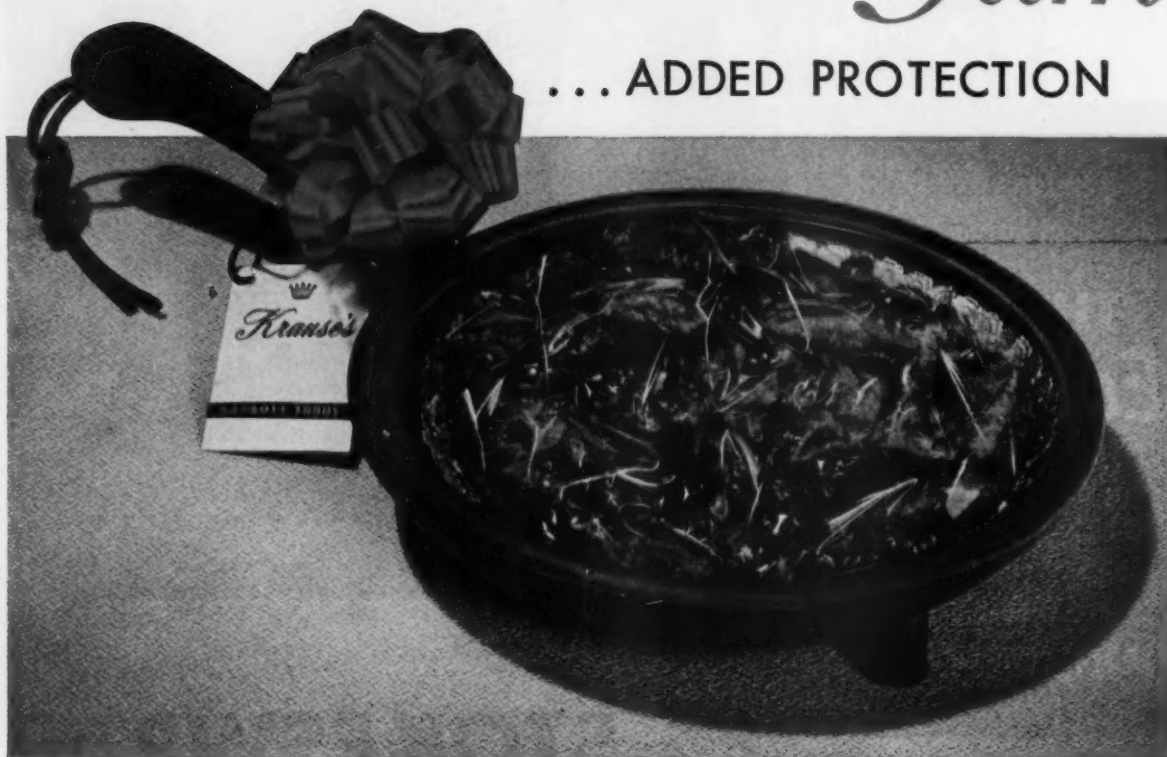


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*Product of Krause's Gourmet Foods, University Station, Minneapolis 14, Minn.



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The laws and regulations pertaining to food products are not static. They are being modified and changed constantly both by statute and interpretation, and therefore require constant study. A good food lawyer is indispensable to both the management and technical staff of a candy company in order for the company to receive the greatest benefit from and protection under these laws.

Some Current Legal Problems of the Food Technologist

by ALBERT I. KEGAN, *Kegan & Kipnis*

I HAVE FOUND that, generally speaking, people who manufacture candy or ice cream or chewing gum like the sweeter side of life and are inclined to bear a better spirit toward their fellowmen.

You are the men who make the decisions from day to day which either make or save me and my breed a lot of work from time to time. That leads me to the question "What is the function of the lawyer, particularly the food lawyer?" Well, in the story books the king always had a couple of wise men behind him who whispered the answers into his ears. They were the "king's counselors" and that title still belongs to lawyers in England and Canada. In this country the story-book king has been replaced by the corporation president. With increasing governmental regulation, you find the lawyer again at the ear of the executive, because it's impossible to make an intelligent decision until you are advised what you have the legal right to make. I was asked, "What does a food lawyer like you do?" We counsel on trademarks. There's the problem of clearing them to see that you're not appropriating somebody else's trademark, even though it's used in a different field.

Every time a new food ingredient is offered to the trade there is a legal problem. Can it be used, and if so how must it be labelled? There is another side to the problem. Part of the function of a lawyer, I think, is to teach his clients the nature of law. The ten commandments have existed, about in their present form, for many thousands of years and I expect they will continue to be respected for a long, long

time. Yet in the field of law there is no such thing as an absolute, and anybody who takes a course in what a food technologist ought to know about the law, picks up a few rules that are likely to become obsolete about the time they're voiced. This is because the judges who have the final say are really trying to make a civilization work, to balance public policy, economic questions, political science; keeping the living organism, that we call the state, intact and operating, and yet in a world that gets increasingly more organized, leaving a little room for all of us to be human beings. Accordingly, the Supreme Court, which once held that segregation was perfectly legal, has now said that it's obviously illegal. Furthermore, as in other fields, it's amazing how many wrong answers you can get by the application of a simple formula to a simple case. Usually it takes some broad experience in the field, some years of living with it on both sides of the fence, and knowing what the Food and Drug Administration does, what industry needs, and what the public wants, before really wise counsel can be given in any of these situations. My feeling is that no matter how much we learn there is always a great deal more to be learned.

The federal Food, Drug & Cosmetic Act and the food laws of a majority of the states place criminal responsibility upon the superintendent or manager of a factory, the theory being that if management tells him to do something illegal, he's supposed to be citizen enough and advised enough to say he

won't do it. By and large I think we can be proud of our food technologists. The quality, the quantity, the cleanliness of food in the United States are better than any place else in the world. I do not give all the credit to the Food and Drug Administration. It can only reach a small percentage of the violations. The real reason the law is obeyed so well is that Americans are essentially law abiding people. To the extent that we believe that the law is wise and just we don't need intimidation to make us behave. All through the food processing industries there is sincere conviction that ever increasing standards of sanitation are desirable, and that in the long run he profits most who gives the best value to the consumer. And despite all the inventions in labor saving machinery and so forth, we're never going to be able to replace the consumer with something else.

What are some of the specific problems that have been agitating you recently? There's the question of artificial chocolate flavor in candy. One point of view is that if a famous name bar has always been enrobed in chocolate, the consumer expects chocolate, and if part of the chocolate is replaced by vegetable fat, a fraud is perpetrated on the consumer. In the field of food control it is generally considered to be fraud to add an artificial flavor to the genuine thing. That is what is back of some suggestions that an enrobed candy bar should have a separate declaration of the ingredients in the coating, and of the ingredients in the center. The federal food law and most of the state laws merely require that all the ingredients be declared upon the label. Nobody expects you in labeling a cookie to recite that the wafer on the bottom is made of certain ingredients, that the soft center is made of something else, and that the chocolate coating is made of various ingredients. You comply with the labeling requirement if you list all the ingredients. Since in most coatings there is some chocolate, and the cocoa and vegetable fat might be normal constituents of the interior, the ordinary label declaration might not show that compound coating was being used. The change to compound coating is something that the consumer ought to be advised of. But hardly anybody reads ingredients statements, except the prosecuting authorities and your competitors.

Another problem arises because a business of any size is bound to cross state lines, and a nationally advertised product will be sold in most of the states. If you have a federal law, forty-eight different state laws, and several thousand different municipal laws, all on the same question, you'll never be able to put a product out if you first have to analyze all those laws. We ought to promote uniformity in our food laws.

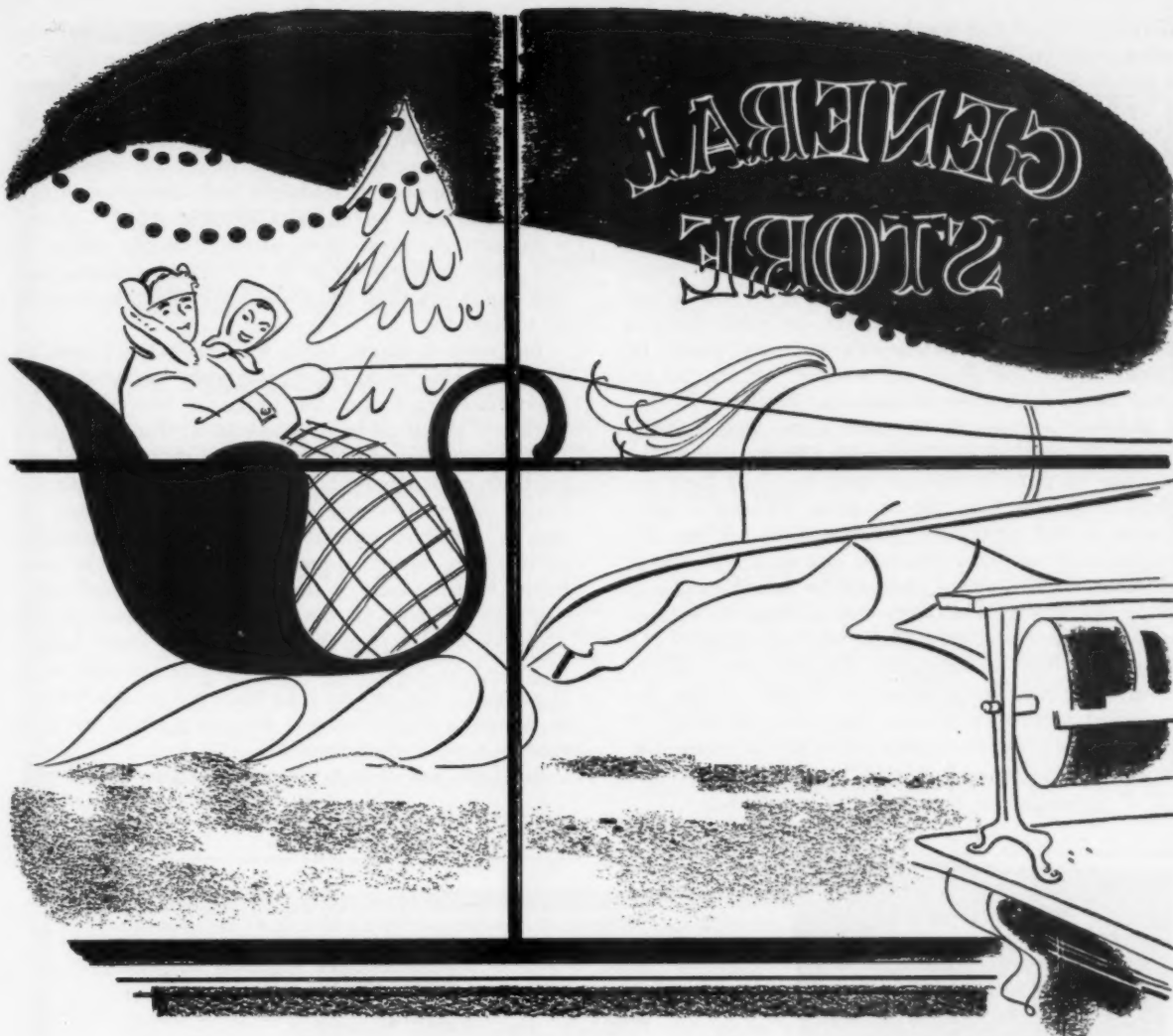
The confectionery industry is blessed with a separate sub-paragraph in the adulteration section of the federal Food law. It prohibits the addition to confectionery of non-nutritive articles, with certain specified exceptions. Sodium benzoate or other harmless preservatives, antioxidants, rancidity inhibitors, non-nutritive surfactants, etc., may be added to any

food except candy. But the non-nutritive section of the confectionery clause has its exceptions: harmless coloring, harmless flavor, etc. Now something that tastes sweet and isn't sugar is an artificial flavoring. It's artificial sugar flavor. So saccharin and cyclamate (trademark "Sucaryl") are just as clearly artificial flavors as artificial strawberry flavor or artificial butter flavor, and their use in foods is not prohibited by the confectionery clause of the statute. But, what does the consumer expect? People usually consider candy to be a high calorie food, a pick-up between meals, and if sugar is removed and a non-nutritive artificial sweetener is added, you no longer have what the public expects. If you use cyclamate, the confection will be sweet, but is it candy? As Marilyn may have said, "Joe's awfully sweet, but can he satisfy?"

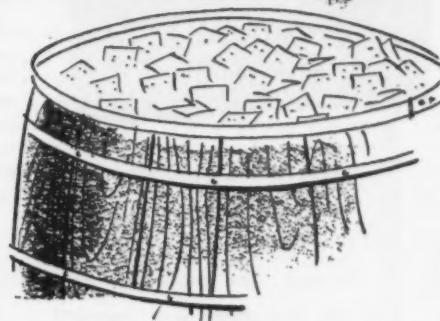
One problem is whether candy is a proper substance to be converted into low calorie foods. Some say no. There's another point of view that says in America you're entitled to take your own choice and that if the product is honestly and fairly labelled for what it is, it should be freely available. Children don't want low calorie foods. A bona fide low calorie confection is going to be more expensive than the high caloric, conventional product. One reason why there has been such an expansion in the sale of saccharin and cyclamate sweetened soft drinks is because its cheaper to take the sugar out and replace it with water. The product has thirst quenching properties, taste sweet, and you can adjust the viscosity without adding calories. But it's neither easy nor cheap to make a really good low calorie confection.

Toxicity is another problem to be considered. It has recently been established that Food, Drug and Cosmetic Orange No. 1, Orange No. 2 and Red No. 1 are carcinogenic. Coumarin is toxic. If it is discovered that some certified colors present a hazard to health, they'll be withdrawn from certification. The Food and Drug Administration will give notice to that effect, give a date when the change goes into effect, thereafter will begin to prosecute those who continue to manufacture or sell the product for food use. Fair advance notice will always be given.

Factory inspection deserves discussion. The Food, Drug and Cosmetic Act formerly provided that it was the obligation of the inspector to ask for and obtain permission before making a factory inspection. Somehow, the Food and Drug Administration had it all figured out that if the inspector failed in his job of getting the voluntary consent of the factory operator, that was a crime on the part of the factory operator. But in the United States you cannot compel a citizen to give his permission against his will, and the Supreme Court so held. Then the Food and Drug Administration unofficially announced that they were going to use search warrants if factory operators didn't "voluntarily" allow inspection. They were also going to use search warrants to go through your records. But invasion of a man's premises by the police has been a thorn in the side of the English speaking people for over a thousand years, and the



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development of the law has been to put very strict safeguards on the search warrant. In order to get a search warrant, who ever asks for it must go before a United States District judge or U. S. Commissioner and show probable cause, as required by Rule 41 of the Federal Rules of Criminal Procedure. There must be a pretty convincing showing either that something has been obtained by or used in a burglary, or that something is being used or stored for the purpose of perpetrating a crime. Even in a plant where there are unsanitary conditions, the adulterated food is not being manufactured for the sake of perpetrating a crime. So I doubt that search warrants would be granted. The use of search warrants to compel inspection of documents is even less likely.

However, when the Supreme Court declared the factory inspection section illegal, Congress amended the law to provide that an inspector shall have the right to inspect. Now the inspector is under no obligation to get permission from anybody. When the inspector shows his credentials and makes a written demand on you signed properly he has the right to go in. I've been asked "Can you tell him the factory superintendent isn't here. Come back tomorrow." The answer is that the inspector has the right to say "Sorry, I'm here on government business. Under the amended section of the law I'm going in today." It is a criminal offense to lock out a federal inspector. In most cases he will wait a reasonable time, and

obviously it is the course of prudence for somebody to accompany the inspector and ask him for his suggestions. I think his suggestions are well worth listening to. The inspector can enter at any reasonable time, not necessarily only during your business hours. Under some circumstances it might be reasonable for him to appear at midnight and demand that the night watchman let him in.

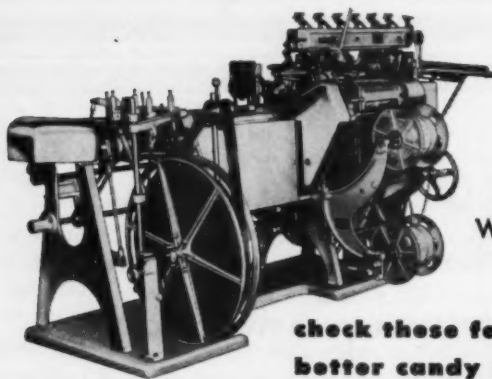
No criminal prosecution can be brought unless at the time the inspector is in the plant he writes out and hands you then and there a specification of what he objects to.

But what is meant by factory inspection? Does it include taking pictures? Photographs have only one main function, to get the judge or jury 'agin' you if there's going to be a prosecution. The only publication on the subject concludes that the federal food inspector has no lawful authority to take photographs unless you give your permission. Silence, of course, can give consent. But when the inspector presents his credentials you can tell him you're very happy to have him go through the place and you'd like him to make all the suggestions he can to improve your operation, but you want to know before he comes in whether he has any cameras with him. If so, you'd like him to take them out and put them in his automobile, because you have given no permission to take photographs.

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CASE 1102*.. Solutions to BELT Problems from the files of VOSS BELTING & SPECIALTY CO.

THE PROBLEM..

A prominent Mid-Western manufacturer of candy bars was getting very unsatisfactory bottoms on his product—bottoms that were dingy, dull and

unattractive. For some time, he attributed the persistence of this condition to a change in formula which he had recently made, which involved the use of compound coating.

THE SOLUTION..

The manufacturer called in VOSS, and asked our opinion of the cause of the trouble, and how it might be eliminated. At our suggestion, he replaced his Enrober Belt with a VOSS KLEER-

GLOSS, of the same type which we have installed in so many candy plants and which are uniformly giving much satisfaction from the standpoint of performance and appearance of finished product.

THE OUTCOME..

It immediately became obvious that the compound coating which the bar manufacturer was using was *not* basically responsible for his difficulties. As soon as production started with the VOSS KLEER-GLOSS Belt, the dingy and unappetizing appearance of the bar bottoms cleared up, and, in fact, the bars looked better than they had ever done in the past. After several months of

constant use the VOSS Belt is still in excellent condition, without any evidence of curling or cracking; it is as easy to keep perfectly clean as when it was installed; and the candy continues to come through with glossy, eye-appealing bottoms.

★

This is a strictly factual report. Name of plant involved is available on request.

VOSS files are full of cases where *Hi-Gloss, Hi-Lustre, Double-Texture* or other well-designed and carefully made VOSS Belts have solved troublesome and expensive problems for candy manufacturers, large and small, throughout the country. VOSS Belts are made specifically for candy plant requirements. They resist cracking and curling, produce goods of fine appearance, make cleaning easy and sanitation sure, and have long production life.

As specialists in this field, we are constantly testing—and often rejecting—new developments in films and fabrics which promise Belt improvements; when we do incorporate new features in our Belts, they are thoroughly tested for *all* critical factors before being marketed. (Look for an announcement soon of such a *tested* improvement, designed to give longer Belt life while maintaining first class production in every other respect).

Meanwhile, phone or write our nearest office for immediate attention to any Belt problems you may have, whatever their nature.

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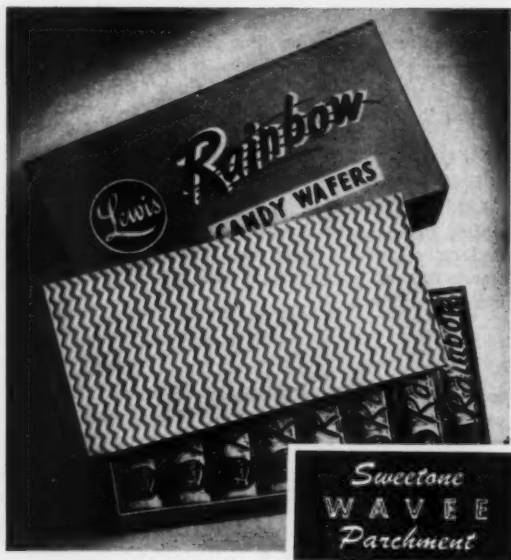
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can tell a city inspector, a state inspector or a federal inspector "We're glad to see you anytime. We think we have the cleanest, best plant in the country. Come on in and take all the photographs you want, and we hope you circulate them, because we're proud of the way we operate." The situation the food technologist should work toward is the one where he can welcome any inspector at any time and have nothing to hide and nothing to be ashamed of.

What is included in a "factory inspection?" Your secret processes? Lists of the people you're shipping to? Receiving data?

The factory inspection section of the law relates to sanitary conditions. It does not reach out of the factory into the office. It does not reach to your records, your recipes. They don't have to be trade secrets. They're just your papers and you don't have to show them if you don't want to. There's a different section of the law which makes it a criminal offense to receive adulterated or misbranded food, just like receiving stolen goods. The receiver is guilty, unless on demand the receiver gives the name and address of the person from whom he received the material and allows access to his receiving records. So, you don't have to show the inspector receiving records, but it certainly is the wise thing to do because it will exonerate you. Shipping records are a different thing. Again, however, it seems to me that how the inspector is to be handled depends upon the total picture, the total program, and that it is wise to have counsel in each of these occasions as they arise. Maybe the Food and Drug Administration is checking factories because it's getting ready to set standards and if it knew about some of the lower operations as well as the higher, maybe the standard would be one that would not be so high that you couldn't live with it. Maybe it's part of a campaign on a particular item. Maybe there's something very serious afoot. An inflexible rule of thumb is a good way to get not only your thumb in the soup, but to get yourself into the soup. I would say that an inspection by the federal people is important enough to be given careful consideration before, during and after the inspection.

A word about these little symbols you see with increasing frequency on food products and everything else: ® and ©. ® is a representation that the United States Government has issued a certificate of trademark registration upon the word, the picture, the notation or the device that appears immediately adjacent to the ®. It is an offense to use it until after you have in your hands the patent from the United States Government registering your trademark. It is an offense to use ® after you've applied for trademark registration unless the certificate of registration has actually been issued. And if you use ® and later try to register the mark, your fraud in misrepresenting to the public that you already had a trademark registration defeats your right to register.

A label or an advertisement is likely to have considerable original matter in it in the way of text or art work. A different law, the copyright law, recog-

nizes a monopoly in that work, and that monopoly is asserted by ©. © stands for copyright, ® stands for registered. © stands for copyright and the difficulty is that if you submit the material to the Copyright Office with the © left off, you forfeit your right to the certificate, just the opposite of the trademark situation. Under the copyright law, you must give notice to everyone on every copy of the work, that you assert copyright in it. You must assert it first, put the © on first, file proof with the copyright office that you've done that, and then get a certificate that you have registered your claim to proprietorship. Since the requirements on ® and © are exactly opposite, it's easy to get them mixed up. It's a simple little matter, but something that has to be watched carefully.

Question: Suppose we take a sugar candy that's mainly sugar and we substitute in whole or part saccharin or Sucaryl and we label it as artificially sweetened. Can we get by with our present label or do we have to go to an involved label?

Answer: The question is as to the labelling requirement when a company formerly making its product largely with sugar replaces it with one that contains artificial sweetening. Now the first problem obviously is a manufacturing one. If you have a product like a mint that's nearly all sugar and take all the sugar out, what are you going to put the artificial flavoring on? That is the big problem in this type of trick. It is against the law to replace a nutritive substance like sugar with any non-nutritive filler of any character with the sole exception of pectin which is mentioned in the statute, but if you were to change from a product that had most of its bulk, most of its calories and most of its food value from sugar, to a pectin, water jelly, I think you'd have something that would eat different, look different and taste different, etc. There's a serious question whether or not it's a fraud upon the public to sell such a product with the artificial sweetener in it under the brand name that the public came to know the genuine product by. It would probably be a rash business man that took a really valuable trademark and applied it to one of these "ersatz" items. So you'd need a different trademark. Secondly, it's obviously a special dietary food if you can make it and it is subject to all the labelling requirements of the special dietary regulations. You have to give calorie information, something that amounts to a gross analysis, a warning statement that saccharin and Sucaryl are artificial sweeteners that should be taken only by those who must restrict their intake of sweets. So you'd have an entirely different label, an entirely different trademark, an entirely different formula, for an entirely different product to go to an entirely different market.

Question: Suppose we want to replace only part of the sugar?

Answer: Then you're keeping in some of the genuine you're fooling the public into thinking there's more by using some of the artificial. If it has any real dietary purpose, in other words if it's going to people

who can't tolerate sugar, there shouldn't be any sugar, and if it's going to people who can eat sugar it ought to be all sugar. What I say about that applies to imitation chocolate flavor in chocolate coating too.

Question: If the substituted product cost more than the genuine would it still be a fraud?

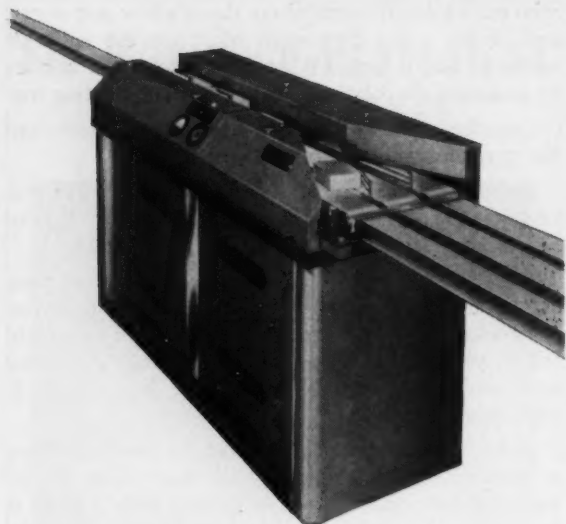
Answer: Never have I seen anybody run the risk of going to jail by giving the public more than they're paying for. It just doesn't work that way.

Question: Mr. Kegan, in the the first part of your talk when you started to talk about chocolate flavor, in labeling when there's just a tiny bit of chocolate which you can put into let's say an artificial coating and mark chocolate as one of the ingredients. Is this alright?

Answer: How should a product be labelled where a genuine chocolate coating had been replaced by one that has added vegetable fat and with it there is some real chocolate? The genuine fortifies the artificial, so you get a better tasting product than with the wholly artificial flavor. All I was saying is that if you have the coating that contains cocoa, vegetable fat, etc., you can run in all the ingredients of the entire place in one ingredient declaration. There's another section where the Food and Cosmetic Act says that if you've got practically none of an expensive or desirable ingredient like chocolate and you list it, the mere inclusion of it on the label may be a fraud. So we come back again to my comment about uniformity. We not only need uniformity between city, state and federal laws. There's a place for uniformity in labeling, and if a particular regulation is pretty extensively violated it puts an unfair burden on the firms which meet the requirement. Another reason why state, federal and city laws should be uniform is because otherwise the national advertiser is placed at an unfair disadvantage with a local operator who doesn't do any interstate business in a state where either the food laws don't amount to much or the enforcement doesn't amount to much. There, a small local operator can get by with a lot of things, but the national producer can't. And that may be part of the prestige that famous brands enjoy. The public realizes that if you sell a lot all over the country it must meet all the requirements everywhere, and therefore, must be uniformly good.

If there's going to be any repeal of the confectionery clause in the law, it's going to come about because the confectionery industry gets out and pushes for uniform treatment with other foods.

The chemical additive bill amounts to this: that if and when it passes and I'd say it's only a question of time, it will be a crime for a supplier to try to talk the manufacturer into adding a chemical in the food to see if it kills anybody, without testing it himself; and it will be a crime to even offer it for use in a product that's to be sold in interstate commerce until the manufacturer has established that the product is safe for use in the amount and proportions needed.



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What's New

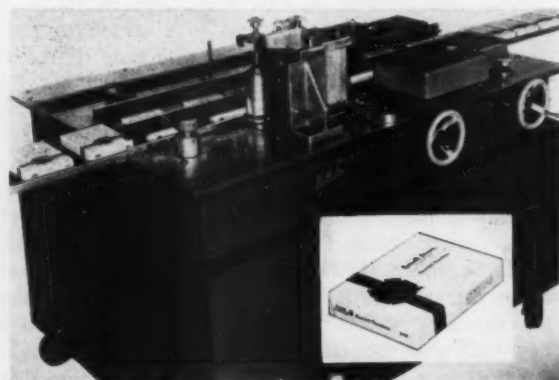
Du Pont has made another of their extensive "Impulse Buying" surveys based on purchases of all types of commodities in super markets. They have extracted from this survey the information pertaining to candy and have in a four-page bulletin entitled "Latest Facts About Candy Purchases in Super Markets." The important fact from this survey is that 92.9% of all candy purchases in super markets are based on decisions made after the buyers enter the store.

According to this survey 7.1% of those who bought candy went into the store with a specific type and brand of candy in mind. Another 12.4% planned some candy purchase, but decided on the brand in the store. The remaining 80½% decided after entering the store that they would buy some candy.

Copies of this report may be had by writing to the Film Department, Du Pont Company, Wilmington 98, Delaware.

Organization of the Material Handling Function is the title of the fourth in a series of booklets published by the Material Handling Institute, Inc. The relation of material handling to the engineering function, the operating function and the training function is detailed in this publication.

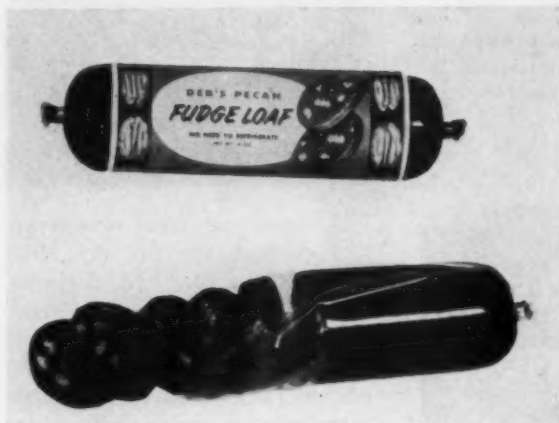
These booklets are available at 50 cents each from the institute at 813 Clark Building, Pittsburgh 22, Pa.



A machine has been developed to print cello wrapped boxes with a code date and label information. The use of this type of machine allows a candy manufacturer to stock only a few stock types of boxes, and to imprint the type of assortment after packing. The machine is adjustable for various sizes of boxes, and will imprint any amount of information along either side or end of the carton. In the illustration a machine is shown imprinting boxes at Russell Stover with a date code and the name of the assortment.

For further information write: Adolph Gottscho, Inc., Hillside 5, N. J.

Confectioner's Briefs



Deb's Candy Inc. is a new candy company started in Evanston, Illinois, by Robert J. Oswald, Pres. The product of this firm is a pecan fudge, wrapped in a round loaf in saran. The machine that performs this packaging function is a standard sausage machine. The machine which packages this product was developed for the sausage industry and has been adapted to cheese packaging. This air-tight package of saran film provides exceptionally good protection for the product and will allow a shelf life of several weeks for this usually highly perishable product. The loaf is 6 oz. in weight and is intended to retail for 19¢ in food stores.

Penick and Ford have specified that ANK, the symbol identifying All Natural Kraft, will from now on appear on all multiwall sacks, meeting these specifications, used to ship their products. This symbol will aid P & F customers to obtain the maximum salvage value for the used bags, as it is the only way that reclaimable sacks may be quickly identified for segregation and sorting from those which may be unusable by the paper board industry.

The I. D. Company of New York, distributors of decorative imported metal cans and other metal ware, has been awarded 1st prize for its exhibit at the Philadelphia Candy Show this fall. This is the fourth one in succession which the I. D. Company has won.

Dr. Walter O. Lundberg has been named chairman for 1955 of the Division of Agricultural and Food Chemistry of the American Chemical Society. Dr. Lundberg is Executive Director of the Hormel Institute and Professor of Agricul-

tural Biochemistry at the University of Minnesota. He is considered an authority on antioxidants and has written for the MANUFACTURING CONFECTIONER on that subject.

The Pacific Intermountain Express Company and its subsidiary, West Coast Fast Freight, has recently initiated a daily motor freight service connecting the Northwest with Eastern, Midwestern and Intermountain territories. The new through-trailer scheduled service is the result of P-I-E's purchase of WCFF and will be offered for all existing pick-up points on the two systems. Interline service with connecting carriers will be used for points outside the systems and East of St. Louis and Chicago. The new service is also offered to shippers of perishable commodities, utilizing the most modern refrigerated transport equipment.

Brigadier J. B. Hillary of Bramigk & Company, England, recently convened a meeting of leading European candy machine manufacturers in West Germany. This group representing some ten million dollars worth of machinery sales per year reportedly discussed a wide field of future marketing and customer service arrangements.



Standing from left to right: Mr. F. Jongmanns, Sales Director, Hansella; Mr. Torolf Nielsen, Mikrovaerk; Mr. Andre Betant, Sales Director, Sapal; Mr. Albert Hankel, Hansella. Seated from left to right: Mr. Hans Bauermeister; Brigadier J. B. Hillary, C. B. E., Bramigk & Co.; Mr. Maurice Krafft, Sapal.

A packaging "Idea Book" has been published which illustrates and describes a wide range of corrugated boxes for a variety of products and uses. Shelf and counter display luggage style and various other types of boxes are included with descriptive copy for each box suggesting proper methods of sealing, packing and displaying.

For a copy write for "How to Pack It" at Hinde & Dauch, Sandusky, Ohio.

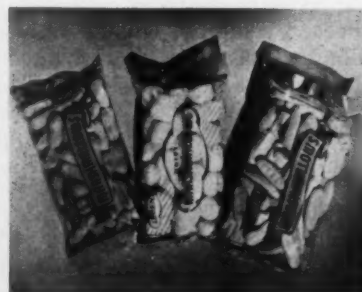


Henry Heide, Inc. has a newly designed take-home window package for their ever popular Darling Creams. Employing a striking combination of colors, gold and yellow and watermelon pink, with the traditional Heide diamond, the package provides an appealing showcase for the soft pastel shades of the creamy candy. The 12 oz. unit puts the package in a very desirable high volume price bracket.

New Packages



A trick or treat overwrap will convert the Chunky Milk Chocolate carton into a Halloween item this year. The overwrap is designed so that the top of the box will be covered with orange jack-o-lanterns, black cats, witches, masks and owls. The sides of the carton will be seen through plain cellophane. These areas will enable the customers to identify the familiar red, brown, and white chunky carton. Packaged by Milprint, Inc.



A neat combination of product protection and display appeal is carried out by these attractive new polyethylene bags for the marshmallow products of Luden, Inc. of Reading, Pa. The durable polyethylene, which acts as an effective barrier to air and humidity, is ideal for keeping this delicate product fresh and soft to the touch. The packages containing marshmallow peanuts, assorted candies, and regular marshmallows are printed in aqua, maroon and rich blue. Packaged by Continental Can Company.

**COOPER-STYLED
FOLDING CANDY
BOXES**

Christmas and New Year

SCORES OF DIFFERENT STYLES
HELP YOU SELL
MORE CANDY

WRITE FOR DISPLAY BROCHURE OF BOX STYLES AND PRICES

COOPER
PAPER BOX CORPORATION

DEPT. M BUFFALO 4, NEW YORK

New Packages



The Creston Confectionery Company of Brooklyn has introduced a new bar with a double life. During most of the year it is called 4-TRIX, and is molded in four sections with each section displaying one of the four playing card suits. However, during the Christmas season, the bar will be molded in the shape of the Santa Claus and will have a seasonal wrapper. The bar is composed of nuts, raisins and compound coating. Both wrappers are foil for eye appeal and protection. Wraps by Milprint, Inc.



Wood and Selick Sweetened Coconut Company, Inc. of New York has recently introduced new packages for a complete line of colored and sweetened coconut. The bags, which come in 4, 8, and 16 oz. sizes are printed in yellow, with red, white and blue used. The coconut comes in green, pink, yellow and orange and is eye-catching to the shopper.

for December, 1954



DURKEE FAMOUS FOODS

**speeds up sealing operations,
gets neater, crimp-free labels**

HOW?

Closing and labeling coconut bags was a slow, expensive job for Durkee Foods—until they installed new, completely automatic Doughboy Sealer-Labelers. Formerly saddle labels were hand stapled—a costly, time-consuming job. Now, Doughboy units heat seal Durkee bags, pick up, fold and apply thermoplastic labels in a continuous, speedy 2-stage operation. Result: tighter seals, neater labels . . . and big savings for Durkee Famous Foods. Let us tell you how a Doughboy heat sealing machine can save you time and money.

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**450 CARAMELS CUT and
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Speed that's al-
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mum production at
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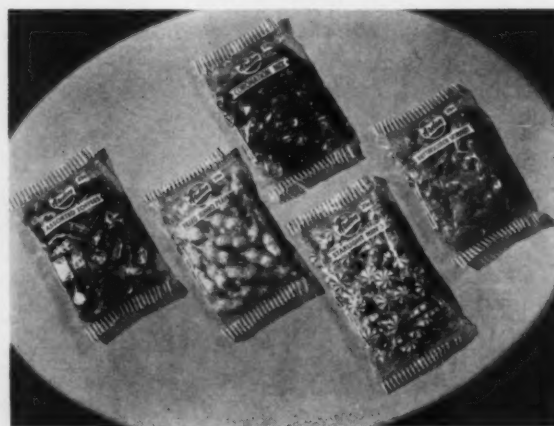
Established 1906

IDEAL WRAPPING MACHINE COMPANY
MIDDLETOWN NEW YORK U. S. A.

New Packages



Greatly increased use of saran film for the packaging of candy is evidenced in the Dow Chemical Company display at the 23rd National Packaging Exposition. Candy manufacturers are finding that the crystal clarity and soft velvety feel of the film add to the sales appeal and shelf life of their product. Companies now using saran film include Heller, Dandy Candy, Nalley's, Powers, Carousels and Mother Goose.



A group of newly designed packages for the "Red" line of Arden Candies, Inc. gives sales punch to the items through the use of a simple design combined with extensive visibility. The top and bottom of the bags are printed in red and white carousel-like stripes. Product and brand identification are given clearly on each side for each identification in mass display. Eleven different items of the "Red" line are packaged in the new printed bags. The family design was created and the cellophane bags produced by Milprint, Inc.



A new Baret Ware treasure is this San Toi Caddy. Octagonally shaped, with a tightly fitted double-walled hinged lid, the San Toi Caddy combines the delicate decoration of the Orient with the superior workmanship of British craftsmen. It is decorated with subtly traced gold trees of white against a rich, glowing green background. The interior is of white enamel $3\frac{3}{4}$ " x $3\frac{3}{4}$ " x $3\frac{1}{2}$ " deep. The San Toi Caddy is distributed by the I. D. Company throughout the United States.



In this package for marshmallow circus peanuts, Dobeckmun designers followed the principles that qualify a package for the children's market. It is eye-catching with bright, sharp colors; is pictorial and easy to understand; has a special feature to capture children's interest. Printed on polyethylene, the colors are red, yellow, white and blue. Both sides as well as front carry brand identification. Designed and printed by the Dobeckmun Company, Cleveland, Berkeley.

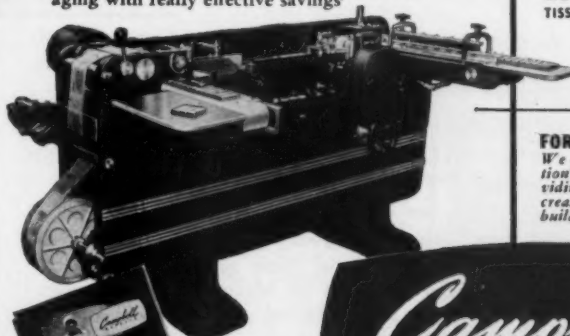


WHEN YOU PACKAGE WITH THE *Campbell* WRAPPER!

Wraps—

Now — you can cut labor costs to the bone and still greatly increase packaging production. This machine wraps at average speeds of 180 units per minute (some products — 300) Automatically! — permitting one person, in many cases, to tend and operate several machines simultaneously. You save on materials, too, as boards, stiffeners and trays need only be used as desired. Exclusive "Float" wrapping is the answer. Packages are neat and square cornered with pre-printed wrappers of any modern packaging material, perfectly positioned. Various types of automatic feeds, sealing and delivery may be employed. Product shape or type — brittle, soft, fragile or solid — present no problem, nor do number of products per single unit. Send us your product. We'll be glad to tell you how we can improve and speed-up its packaging with really effective savings.

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BANDAGES • BAR SOAPS
CANDLES • CAMERA FILM
CAKES • COOKIES • DONUTS
ROLLS • CRACKERS • CHEESE
CANDIES — BARS • BRUSHES
CONFECTIONS • STICK CANDY
LEMONS — ORANGES
ICE CREAM BARS • PLASTICS
FROZEN FOODS • SILVERWARE
FISH • MEATS • BACON
CHOPS • STEAKS • FRANKS
EYE DROPPERS • WALL TILE
BALL BEARINGS • HOSIERY
MACHINE PARTS • NOVELTIES
TIRE PATCHES • TOYS
CAMPHOR ICE • TOILET ROLLS
WOODEN SPOONS
TISSUE HANKIES • THUMB TACKS
AND 101 VARIED
MISCELLANEOUS
PRODUCTS



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We are contributing to the nation's defense program by providing a large part of our increased production facilities for building precision armaments.

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illustrated
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Campbell
WRAPPER

Manufacturers of Aniline and Gravure Presses, Folders, Interfolders, Laminators, Waves, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Creppers and Tissue Converting Units.



"Malt-etts" made by Leaf Brands, Inc. of Chicago is now one of the fastest selling five-cent items in the Leaf Line due to a newly designed window box package.



Suchard Chocolate Squares, which are produced by the Wilbur Suchard Company of Lititz,

Pa., have a new and different package. Each of the five varieties Milk Chocolate, Milk Chocolate with Almonds, Crisp, Bittra, and Mint can be identified by a particular color, and the designs are modernistic and neat. Each package contains paint-by-number pictures and a coupon offer for an oil paint set which should add up to increased sales. Package by Milprint.

Another Case History from the Files of CHAMPION:



A colorful, sales-compelling, cello window take-home package is now being used for Heide Candy Corn. Sized to sell in the most popular price brackets, the package combines yellow, orange and two shades of brown in a fresh modern design.



1¢ Bubble Gum Cigarettes are now packed in a new colorful display. Each 2-box deal contains 48 tattoo sheets featuring Indians, Pirates, Cowboys, Baseball Players, etc. Each cig bears a brand name and comes in different colors. Packaged by Philadelphia Chewing Gum Corporation.

Problem:

An order normally calling for six weeks delivery was needed in less than three weeks by an Iowa manufacturer* to prevent a complete shut-down on their line.

Solution:

Champion engineered a special set-up to slit stock for this customer on part of their order and delivered it in plenty of time to keep their line going.

Moral: You can depend on Champion's prompt service and timely delivery for your regular bag and roll stock orders and on those special "rush" jobs as well. You can also depend on Champion for design ideas and other important services. For proof, see one of the twenty-five Champion Packaging Specialists located coast-to-coast, or write or call us today.

*Name on request.

160 NORTH LOOMIS STREET • CHICAGO 7, ILLINOIS

Converters of cellophane and glassine printed rolls and bags



CANDY PACKAGING

Published bi-monthly by

THE MANUFACTURING CONFECTIONER PUBLISHING CO.

418 NO. AUSTIN BLVD.
OAK PARK, ILLINOIS

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THE MANUFACTURING CONFECTIONER

THE CANDY BUYER'S DIRECTORY

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DECEMBER

Vol. 14, No. 6

1954

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PLAIN or
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POLYETHYLENE

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418 N. Austin — Oak Park, Ill.

CODE DATERS

NAME MARKERS

PRICERS

Gummed Tape Printers

For The Candy Industry

Write for information

KIWI CODERS CORP.

3304-06 N. Clark St., Chicago 13, Ill.

CALENDAR

December 9-10—Western Confectionery Salesmen's Association
40th Annual Convention, Congress Hotel, Chicago, Ill.,
7:00 p.m. Friday, 10th Gala Stag Party and Ladies Party.

December 11—Confectionery Salesmen's Club of Baltimore an-
nual banquet—Stag—will be held at the Lord Baltimore
Hotel, Baltimore, Md.

December 11—Los Angeles Confectionery Sales Club Annual
Christmas Dinner Dance and Cocktail party at the Hotel
Statler, Los Angeles, Calif.

December 15—Annual meeting of the Boston Confectionery
Salesmen's Club, Inc. at the Sheraton-Plaza Hotel, Boston,
Mass.

December 20—Chicago Candy Club monthly meeting at Fur-
niture Club of America, 17th Floor, 666 Lake Shore Drive,
Chicago, Ill.

December 21—Candy Executives Club Christmas party, St.
George Hotel, Brooklyn, N. Y.

December 22—Southern California Association of Tobacco Dis-
tributors monthly meeting at Rodger Young Auditorium,
936 W. Washington Blvd., Los Angeles, Calif.

December 29—Gopher Candy Club Christmas Party at the
Covered Wagon, 6:30 p.m., Minneapolis, Minn.

January 11—Boston Section of the American Association of
Candy Technologists monthly meeting at 6:30 p.m. at the
Hotel Continental, Cambridge, Mass.

January 18—Chicago Section of the American Association of
Candy Technologists monthly meeting at 6:30 p.m. at the
Furniture Club, Chicago, Ill.

1955 Convention Schedule

January 30-February 2—Philadelphia Candy Show, Ben Frank-
lin Hotel, Philadelphia, Pa.

February 24-25—Western Candy Conference, Ambassador
Hotel, Wilshire Blvd., Los Angeles, Calif.

April 16-17—Semi-Annual meeting Packaging Machinery Manu-
facturers Institute, Palmer House, Chicago, Ill.

June 5-8—Associated Retail Confectioners of the United States,
Drake Hotel, Chicago, Ill.

June 5-10—National Confectioners' Association, Conrad Hilton,
Chicago, Ill.

July 13—Southern Salesmen's Candy Club, Hotel Roanoke,
Roanoke, Va.

July 14-15—Southern Wholesale Confectioners Association,
Hotel Roanoke, Roanoke, Va.

July 16-19—Metropolitan Candy Brokers' Association annual
exposition, Hotel Commodore, New York, N. Y.

July 31-August 4—National Candy Wholesalers Association,
Sherman Hotel, Chicago, Ill.

September 15-18—Annual Meeting Packaging Machinery Manu-
facturers Institute, The Homestead, Hot Springs, Va.

September 18-21—Philadelphia Candy Show, Ben Franklin
Hotel, Philadelphia, Pa.

RIBBONS

ROWS and ROSETTES
for your CANDIES
Satin—Chiffon—Tinsel
Ribbons—Rayon Ribbonzene

R. C. TAFT CO.

25-27 SOUTH WACKER DRIVE
CHICAGO 6, ILLINOIS

NEW LOESCH MACHINE...

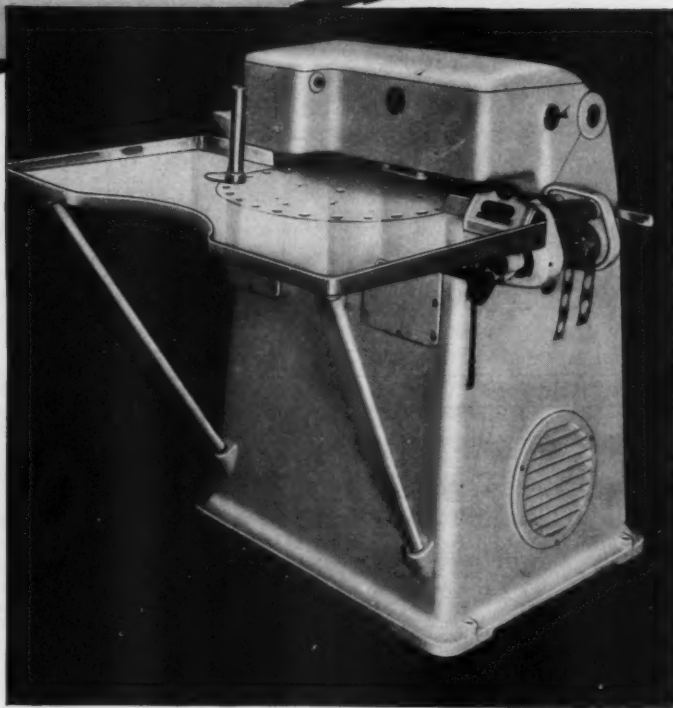
Foils and Embosses Perfect Chocolate Coins—AUTOMATICALLY!

At last you can get perfectly embossed chocolate coins—automatically. Even the serrations on the rim are formed cleanly and evenly in the same operation because of Loesch's exclusive two-foil feed. And another Loesch improvement is the jam-proof feeder plate. This practically eliminates any production delays which result from jammed chocolate slugs. And the Loesch is ruggedly built to take real production punishment yet produce the finest foiled and embossed chocolate discs. Here's why.

The uncoined chocolate pellets are placed upon the round in-take plate and move automatically to the foiling station. There, two cut-outs of foil are placed on the top and bottom of the pellet. The sides as well are tightly covered.

The foiled pieces are then carried via the feed plate to the stamping station. Coining of the top and bottom, as well as the serrations on the rim, are performed in one automatic operation. And you never get dirty uneven milled edges. The finished coins are carried to a point of discharge and released automatically.

Another of the machine's unique features is the hinged push-button operated stamping head which permits change-over from one size or shape to another within a few minutes. Any other flat



shapes may be embossed as well, and necessary parts for new shapes are available at any time. The machine, with only one operator, will produce 80-100 perfect pieces per minute.

GEVEKE & CO., INC.

25 BROADWAY, NEW YORK 4, N. Y.

Manufacturer's Representatives
Specialized Machinery and Equipment

FOUNDED AMSTERDAM, 1876

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

Selected Best Candies of the Year

Code 2B54

Peanut Brittle

1 lb.—59c

(Sent in for analysis #4764)

Appearance of Package: Good.

Box: Folding, outside foil wrapper printed in gray, brown, red and yellow. Imprint of a tray of peanut brittle in color.

Appearance of Box on Opening: Good.

Brittle:

Color: Good.
Texture: Good.
Peanuts: Good.
Taste: Good.

Remarks: The best peanut brittle we have examined in some time. Very well made and good eating.

REVIEW: Peanut brittle should be brittle and the peanuts should have a good brown roast, also the right amount of salt and soda. These peanuts had the right amount of ingredients and the proper cook.

Code 2F54

Peanut Butter Kisses

9 ozs.—29c

(Purchased in a department store, Chicago, Ill.)

Appearance of Package: Fair.

Container: Cellulose bag, printed paper clip on top. Cardboard Santa Claus in colors inside of bag. Kisses wrapped in red, white and green wax paper.

Kisses:

Jacket: Good.
Center: Good.
Texture: Good.
Taste: Good.

Remarks: A very good eating molasses peanut butter kiss. The best we have examined in some time.

REVIEW: We examine a number of peanut butter kisses during the year but very few are made correctly. These kisses had a good molasses flavor and contained a good amount of real peanut butter.

Code 2H54

Assorted Chocolates

1 lb.—\$1.10

(Purchased in a retail candy store, Detroit, Mich.)

Appearance of Package: See remarks.
Box: One layer type, buff glazed paper top, name in brown panel. Printed brown sides.

Appearance of Box on Opening: Good.

Number of Pieces:

Dark Coated: 11.
Light Coated: 9
Vanilla Fudge Nut Rolls: 2.
Chocolate Fudge Nut Rolls: 2.
Vanilla Nut Caramel: 1.
Cellulose Wrapped Butter Crunch: 1.
Pecan Chew: 1.
Vanilla Fudge in Paper Cup: 1.
Chocolate Fudge in Paper Cup: 1.

Coatings:

Colors: Good.
Gloss: Good.
Strings: Fair.
Taste: Good.

Dark Coated Centers:

Cherry in Cream: Cream not soft enough.
Maple Cream: Good.
Marshmallow: Good.
Caramel & Honeycomb Chip: Good.
Peppermint Cream & Molasses Chip: Good.

Peppermint Cream Wafer: Good.

Light Coated Centers:

Molasses Coconut: Good.
Marshmallow & Nut Coating: Good.
Nut Brittle: Good.
Vanilla Coconut Paste: Good.
Caramel Wafer: Good.
Fudge Roll Slices: Good.
Fudge in Paper Cups: Good.
Vanilla Nut Caramels Unwrapped: Good.
Nut Butter Crunch: Good.
Pecan Chew: Good.

Assortment: Good.

Remarks: The best box of chocolates

Candy Clinic Schedule For the Year

JANUARY—Holiday Packages; Hard Candies

FEBRUARY—Chewy Candies; Caramels; Brittles

MARCH—One-Pound Boxes Assorted Chocolates up to \$1.00

APRIL—\$1.00 and up Chocolates; Solid Chocolate Bars

MAY—Easter Candies and Packages; Moulded Goods

JUNE—Marshmallows; Fudge

JULY—Gums; Jellies; Undipped Bars

AUGUST—Summer Candies and Packages

SEPTEMBER—Bar Goods; 5c Numbers

OCTOBER—Salted Nuts; 10c-15c-25c Packages

NOVEMBER—Cordial Cherries; Panned Goods; 1c Pieces

DECEMBER—Best Packages and Items of Each Type Considered During Year; Special Packages; New Packages

and candies we have examined at this price in a long time. Box was of very good quality and made good eating. Cheaply priced at \$1.10 the pound. Suggest a cellulose wrapper as top of box was badly finger worked.

REVIEW: It is very seldom that we get an outstanding box of assorted chocolates at this price. In this assortment, however, the centers were very well made and of very good quality. The coating was also well made and had a good chocolate taste. The homemade candies, too, were well-made and good eating.

Code 1H54
Coffee Tablets
1 oz.—5c

(Purchased at a news stand, N.Y.C.)

Appearance of Package: Good.

Wrapper: Inside foil wrapper printed brown, yellow and white. Imprint of coffee beans in colors. Each piece in cellulose wrapper.

Tablets:

Color: Good.

Texture: Good.

Flavor: Good.

Remarks: The best 5c package of coffee hard candy tablets we have ex-

amined this year. Neat and attractive wrapper.

REVIEW: At the price of 5c for 1 oz., these coffee tablets were outstanding in coffee flavor. Many coffee hard candy pieces have a strong burnt flavor.

Code 1L54
Hard Candy Whistle Pops
4¾ ozs.—33c

(Purchased in a department store, N.Y.C.)

Appearance of Package: Good.

Container: Folding box, cellulose windows, printed in yellow, blue, red and white.

Pops: Each in a cellulose wrapper. A very good whistle.

Color: Good.

Gloss: Fair.

Flavors: Fair.

Remarks: Attractive box. The best whistle pop we have examined in some time. Very well made and cheaply priced at 33c. A good hard candy pop novelty.

REVIEW: This is an exceptionally good hard candy novelty. It looked like a whistle and it worked very well.

Code 2M54
Milk Chocolate Coated
Peanut Squares
6½ ozs.—29c

(Purchased in chain grocery store, Oak Park, Ill.)

Appearance of Package: Good.

Box: White, folding, printed in brown and yellow. Cellulose window top.

Coating: Good.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: One of the best coated peanut chips we have examined in some time. Very good eating.

REVIEW: These peanut squares contained a good amount of peanuts which were well roasted and the candy was cooked just right. This package was very cheaply priced at 6½ ozs. for 29c.

Code 2O54
Peanut Brittle Bar
6 ozs.—19c

(Purchased in a chain food store, Indianapolis, Ind.)

Appearance of Bar: Good.

Wrapper: Bar is oblong shape, paper band outside printed in yellow, white, red and blue. Overall print of peanuts. Inside wax paper wrapper.

Brittle:

Color: Good.

Texture: Good.

Peanuts: Good.

Taste: Good.

Remarks: The best peanut bar of this type we have examined in some time.

**You mean-by improving
the color, we increased
sales that much!**



Step-up the consumer-acceptance of your
product by adding the sales-appeal of...



Peacock Brand
CERTIFIED FOOD COLORS

Manufactured and Distributed by Wm. J. Stange Co.
Chicago 12, Illinois Oakland 21, California
In Canada: Stange-Pemberton Ltd., New Toronto, Ont.

REVIEW: Most peanut bars are too soft, and the peanuts are not roasted enough. Often the candy lacks flavor. This bar was very well-made and good eating.

Code 3K4
Assorted Fudge
1 lb.—80c

(Sent in for analysis #4765)

Container: Folding box, white, printed in green. Fudge in wax paper wrappings.

Chocolate Nut Fudge:

Color: Good.
Texture: Good.
Taste: Good.

Vanilla Nut Fudge:

Color: Good.
Texture: Good.
Taste: Good.

Remarks: The best fudge of this kind we have examined in some time. Well made fudge, good eating. Should be a good seller at 80c the pound.

REVIEW: Seldom do we get a good sample of fudge. Most are dry, hard and lack a good fudge flavor. Many are like "rubber." These fudge pieces had a good fudge texture and a good flavor.

Code 4B54
Assorted Chocolates
1 lb.—\$1.15

(Purchased in a candy shop, Milwaukee, Wis.)

Appearance of Package: Good.

Box: One layer type, white glazed paper, name embossed in brown, gold printed blocks in center. White paper wrapper, overall print of name in gold, tied with brown twine.

Appearance of Box on Opening: Good.

Number of Pieces:

Dark Coated: 12.
Light Coated: 17.
Pecan Roll Slices: 2.

Coatings:

Colors: Good.
Gloss: Fair.
Strings: Fair.
Taste: Good.

Dark Coated Centers:

Vanilla Buttercream: Good.
Vanilla Cream and Brazil Nut: Good.
Vanilla Coconut Cream: Good.
Butterscotch: Good.
Marshmallow and Jelly: Good.
Orange Cream: Good.
Chocolate Coconut Cream: Good.
Chocolate Buttercream: Good.
Pineapple Cream: Good.
Vanilla Cream: Good.
Caramallow: Good.

Light Coated Centers:

Chocolate Nut Buttercream: Good.
Buttercream and Almonds: Good.
Nut Caramel: Good.
Nut Crunch: Good.
Pecan Caramel Chew: Good.
Nut Taffy: Good.
Buttercream, Pecan Nut Coating: Good.
Maple Pecan Cream: Good.

Peanut Cluster: Good.
Filbert Cluster: Good.
Chocolate Paste and Nuts:—Good.
Chocolate Nut Caramel: Good.
Pecan Roll Slices: Good.

Assortment: Good.

Remarks: The best box of assorted chocolates we have examined at this price this year. Very good quality and workmanship.

REVIEW: In this price field, we seldom find a good grade of chocolates. Very cheap coatings, small assortments and cheaply made centers are the rule. This sample had a very good assortment of centers. The homemade pieces were of good quality and made good eating.

Code 5A4
Hollow Chocolate Rabbit
2½ ozs.—25c

(Purchased in a chain department store, Oak Park, Ill.)

Appearance of Rabbit: Good.

Size: Good.

Wrapper: Printed cellulose wrapper.

Rabbit:

Chocolate: Good.

Gloss: Good.

Molding: Good.

Taste: Good.

Remarks: The best hollow chocolate rabbit at this price we have examined this year. Neat and attractive wrapper.

REVIEW: Most hollow chocolate

THE YEAR'S MOST IMPORTANT PROMOTIONAL OPPORTUNITY FOR CANDY MANUFACTURERS

THE CANDY BUYERS' DIRECTORY

WHAT THE DIRECTORY IS

The Candy Buyers' Directory is the only published reference guide to all wholesale candy manufacturers that is available to the professional candy buyer.

1. The first section contains an alphabetical list of all wholesale candy manufacturers, their addresses, the name of their salesmanager and a cross index to confectionery lines offered.
2. The second section is a complete product classification of all candy manufacturers, broken down into more than 65 general types of candy.
3. The third section is the trade name directory listing several hundred trade names used by candy manufacturers for their products.
4. The fourth section is the Directory of Candy Brokers. Here complete information on most of the well-known candy brokers is available.

WHERE THE DIRECTORY GOES

The Candy Buyers' Directory is the reference guide for more than 8,000 professional candy buyers, who buy for:

Candy & Tobacco Wholesalers

Wholesale Grocers

Drug Wholesalers

Food Chains

Chain Drugs

Variety Chains

Department Stores

Vending Operators

Theatre Operators

These firms channel candy into over 1,000,000 retail outlets . . . operate over 25,000 trucks . . . maintain over 2,700 refrigerated warehouses . . . do business in all 48 states.

pieces are made of a cheap chocolate, are very dry and tasteless. The chocolate in this piece had a good chocolate taste and was good eating.

Code 5B4

Chocolate Coated Cream Egg

1 oz.—5c

(Purchased in a chain department store, Oak Park, Ill.)

Appearance of Egg: Good.

Size: Good.

Wrapper: Foil wrapper, printed in red, gold and white.

Egg:

Coating: Light: Good for 5c seller.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: Very well-made and good eating. One of the best 5c cream eggs we have examined this year.

REVIEW: We examine a number of 5c cream eggs over the year and many were not up to standard. They are dry, hard and tasteless. This cream egg had a good flavor and the cream was soft and smooth.

Code 5F4

Hollow Chocolate Rabbit

1 oz.—10c

(Purchased in a chain department store, Oak Park, Ill.)

Appearance of Rabbit: Good.

Size: Good.

Wrapper: Printed cellulose wrapper in colors.

Chocolate:

Color: Good.

Gloss: Good.

Molding: Good.

Taste: Good.

Remarks: The best 10c chocolate rabbit we have examined this year.

REVIEW: For a ten cent number, this hollow rabbit was outstanding. It was very well-made and of good quality.

Code 6B4

Assorted Crystallized Gums and Slices

1 lb.

(Purchased in Cleveland, Ohio.)

Appearance of Package: Good.

Box: One layer type, top printed in pink and green. Cellulose wrapper. Name in white and green.

Appearance of Box on Opening: Good.

Slices:

Colors: Good.

Texture: Good.

Sugaring: Good.

Flavors: Good.

Assorted Gums:

Colors: Good.

Crystal: Good.

Texture: Good.

Flavors: Good.

Sugared Peices: Good.

Remarks: The best assorted gums and slices we have examined this year.

REVIEW: Gums, jellies, etc. are some of the most abused pieces;

many are tough, lack flavor, and have very poor sanding or crystal. Their colors are often too bright. These gums and slices were well made, had very good flavors, and all were good eating.

Code 6F4

Nut Roll

1 oz.—5c

(Purchased in a chain dry good store, Chicago, Ill.)

Appearance of Bar: Good.

Size: Good.

Wrapper: Amber cellulose wrapper printed in red and white.

Bar:

Peanuts: Good.

Caramel: Good.

Center: Good.

Remarks: A very good eating nut roll, the best we have examined this year. Suggest manufacturer check his cost as we doubt if there is a living profit in it at 5c retail.

REVIEW: There are many nut rolls on the market today but only a few are good. This nut roll was very well-made and good eating. It was very cheaply priced as it was well over one ounce.

Code 7M4

Vanilla & Chocolate Nut Fudge

1 lb.—59c

(Purchased in a food store, Chicago, Ill.)

Container: Folding box, white printed in red and blue.

Fudge:

Colors: Good.

Texture: Good.

Taste: Good.

Remarks: The best fudge at this price we have examined this year.

REVIEW: This package was cheaply priced at 59c the pound. A real good eating fudge, very well-made.

Code 6G4

Hollow Milk Chocolate Molded Doll

1 oz.—10c

(Purchased in a chain dry goods store.)

Appearance of Piece: Good.

Container: Cellulose bag, paper clip on top printed in lavender and yellow.

Piece:

Molding: Good.

Gloss: Good.

Taste: Good.

Remarks: The best 10c milk chocolate molded piece we have examined this year. Very good chocolate for this type of confection.

REVIEW: We have examined a number of dark hollow chocolate pieces. This piece was made of a very good milk chocolate and was a good looking chocolate novelty.

Code 6K4

Toasted Marshmallows

1 lb.—19c

(Purchased in a dry goods store, Chicago, Ill.)

Appearance of Package: Good.

Container: Polyethylene bag, paper clip on top printed in yellow and red.

Marshmallows:

Toasted Coconut: Good.

Marshmallow: Good.

Taste: Good.

Remarks: The best toasted marshmallow at this price we have examined this year.

REVIEW: These toasted marshmallows were cheaply priced at 19c per pound. They were of good quality and very good eating.

Code 7J4

Marshmallow Peanuts

14 oz.—29c

(Purchased in a chain grocery store.)

Appearance of Package: Good.

Container: Polyethylene bag printed in red, white and blue. Imprint of clown in colors.

Peanuts:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: One of the best marshmallow peanuts we have examined this year.

REVIEW: We seldom get a good marshmallow peanut. Most are dry and hard. These peanuts were good eating and had a good flavor.

Code 8F4

Licorice Lozenges

1 1/4 ozs.—3 for 10c

(Purchased in a chain drug store, St. Paul, Minn.)

Appearance of Package: Good.

Container: Folding box with window printed in purple and yellow.

Lozenges:

Colors: Good.

Panning: Good.

Finish: Poor.

Texture: Good.

Taste: Good.

Remarks: One of the best licorice pieces we have examined this year at this price.

REVIEW: Strange to say, we find most all licorice pieces are well-made and have a good licorice flavor. These licorice pieces were very tender and had a real licorice flavor.

Code 8B4

Crunch Bar

3/4 oz.—3 for 10c

(Purchased in a chain drug store, St. Paul, Minn.)

Wrapper: Glassine printed in brown, blue and white.

Coating: Milk Chocolate: Good.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: The best bar of this kind we

have examined this year. Well-made and good eating. Suggest manufacturer check the cost on this bar as it is very cheaply priced at 3 for 10c retail.

REVIEW: Over the year, we examine so called crunch bars by the score, but most are very hard, lack flavor, and have little or no nuts. This crunch was outstanding in quality at the price of 3 for 10c.

Code 8D4

Nut Cluster

1 oz.—3 for 10c

(Purchased in a chain drug store, St. Paul, Minn.)

Appearance of Cluster: Good.

Wrapper: Glassine printed in orange, blue and white. Piece is in a pattie shape, cream wafer dipped in milk chocolate and peanuts.

Coating: Good.

Peanuts: Good.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: The best bar of this kind we have examined this year. Suggest manufacturer check his cost as we doubt if there is any profit in this bar when sold at 3 for 10c.

REVIEW: This cluster was well over one ounce. The quality was very good and it made enjoyable eating. Very cheaply priced at 3 for 10c.

Code 8H4

Pecan Nougat Roll

8 ozs.—39c

(Purchased in a chain drug store, St. Paul, Minn.)

Appearance of roll: Good.

Wrapper: Amber colored cellulose printed in red and buff.

Roll:

Pecans: Good.

Caramel: Good.

Nougat: Good.

Taste: Good.

Remarks: One of the best pecan nougat rolls we have examined this year. Cheaply priced at 39c for 8 oz.

REVIEW: We find the nougat in many pecan rolls hard and dry, also grained. This pecan roll had a good amount of pecans and the candy part was of good quality.

Code 8E4

Coated Malted Milk Balls

¾ oz.—3 for 10c

(Purchased in St. Paul, Minn.)

Appearance of Package: Good.

Container: Cellulose bag printed in purple and red.

Balls:

Coating: Cocoa: Fair.

Center:

Color: Good.

Texture: Good.

Taste: A good malted milk taste.

Remarks: The best coated malted milk

balls we have examined this year at this price.

REVIEW: These balls were very good eating and had a good malted milk flavor.

Code 9N4

Peanut and Nougat Bar

1½ ozs.—5c

(Purchased in a chain drug store, N. Y. C.)

Appearance of Bar: Good.

Wrapper: Glassine printed in red, white and blue.

Coating: Milk Chocolate: Good for a 5c seller.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: The best bar of this kind we have examined this year.

REVIEW: The nougat was very good in this bar, also the coating for a 5c seller.

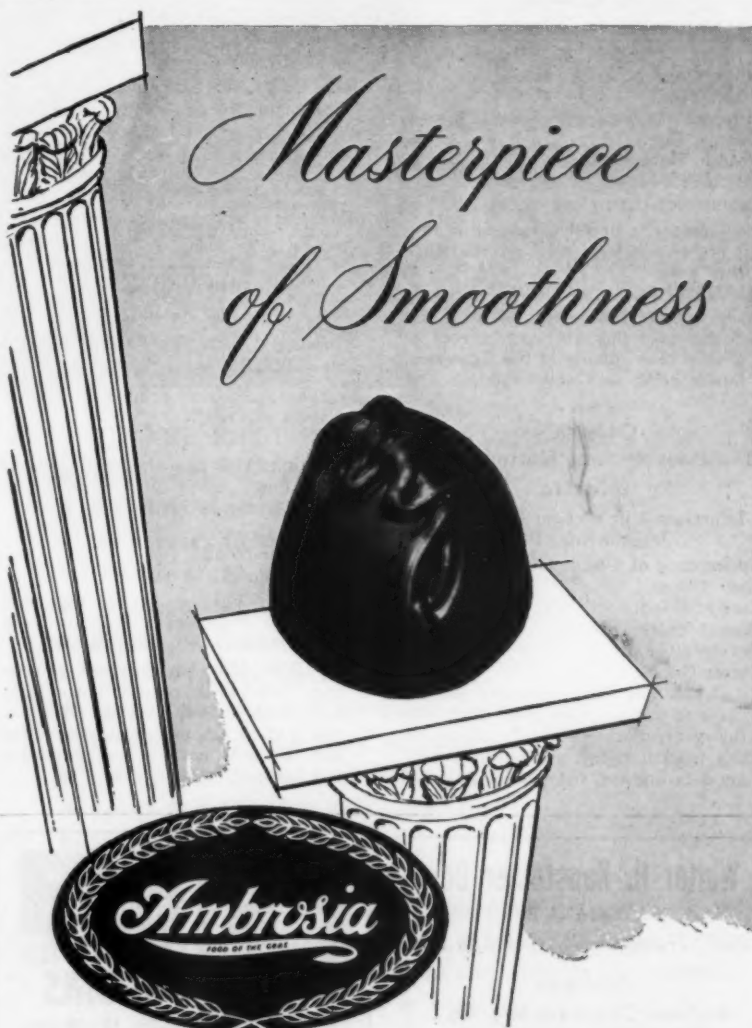
Code 9R4

Summer Coated Maple Nougat Bar With Walnuts

1 oz.—5c

(Purchased in a drug store, N.Y.C.)

Appearance of Bar: Good.



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AMBROSIA CHOCOLATE COMPANY
MILWAUKEE, WISCONSIN

Celebrating 60 Quality Years

Wrapper: Glassine printed in white, gold and blue.

Bar:

Coating: Good for a summer coating.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: A well-made nougat bar. Should be a good 5c seller for the summer months.

REVIEW: Most bars with summer coating are not good eating. This was very good eating, well-flavored, and a good eating nougat.

Code 9B4

Peanut Butter Stick

1/4 oz.—1c

(Purchased in a chain store, Jacksonville, Fla.)

Appearance of Stick: Good.

Size: Good.

Wrapper: Wax paper printed in brown.

Candy: Good.

Peanut Butter: Good.

Texture: Good.

Taste: Good.

Remarks: The best hard candy peanut piece of this kind we have examined this year.

REVIEW: Some of the 1c pieces on the market today put many of the 5c bars (of the same type piece) to shame. The quality in this 1c peanut butter stick was very good.

Code 9C4

Molasses Peanut Butter Chew 2 for 1c

(Purchased in a chain drug store, Jacksonville, Fla.)

Appearance of Piece: Good.

Size: Good.

Candy: Good.

Peanut Butter: Good.

Texture: Good.

Taste: Good.

Remarks: The best molasses peanut chew at this price we have examined this year. Some of the 1c pieces on the market today are exceptionally good eating and the quality is good.

REVIEW: The same can be said for the chew as was said about the peanut butter stick at 1c.

Code 9D4

Coconut Bar

1 1/2 ozs.—5c

(Purchased in a chain drug store, Jacksonville, Fla.)

Appearance of Bar: Good.

Wrapper: Cellulose, paper seal printed in red.

Bar: Bar is a toasted coconut paste.

Color: Good.

Texture: Good.

Taste: Good.

Remarks: A well-made coconut paste bar, one of the best we have examined this year. Had a very good coconut flavor.

REVIEW: Most coconut bars we examine are dry and some are grained. This coconut bar had a good amount of coconut in it and a very good texture.

Code 9O4

Milk Chocolate Covered Peanut Butter Bar

1 1/8 oz.—5c

(Purchased in a drug store, N.Y.C.)

Appearance of Bar: Good.

Wrapper: Glassine printed in yellow, brown and red.

Bar:

Coating: Milk chocolate and chopped almonds. Good for a 5c bar.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: The best bar of this kind we have examined this year. Very well-made center and good eating.

REVIEW: Most bars of this type contain very little peanut butter and have a very cheap coating. This bar had a good amount of peanut butter and the milk coating was good for a 5c seller.

Code 9F4

Chocolate Shell Mints

8 ozs.—78c

(Purchased in a department store, N.Y.C.)

Appearance of Box: See remarks.

Box: Oblong shape, top printed in dark and light green, named in yellow.

Mints are chocolate and summer coating shell pieces.

Coating: Dark.

Color: Good.

Shells: Very good.

Center:

Color: Good.

Texture: Good.

Flavor: Good.

REVIEW: Well-made shell pieces and good eating. Very good workmanship and flavor.

Code 9P4

Coated Almond Nougat and Caramel Bar

1 3/8 oz.—5c

(Purchased in a chain drug store, N.Y.C.)

Appearance of Bar: Good.

Wrapper: Glassine printed in silver, blue and white.

Bar:

Coating: Fair.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: One of the best nougat bars we have examined this year.

REVIEW: While the coating of this bar was not up to standard, the nougat in the piece was very well made and good eating.

Code 10B4

Assorted Caramel Whirls

8 1/2 ozs.—33c

(Purchased in a department store, Chicago, Ill.)

Appearance of Package: Fair.

Walter H. Kansteiner Co.

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Improve production facilities
Lower operation costs

J. C. Corrigan Co., Inc.
41 Norwood St., Boston 22, Mass.

Container: Cellulose bag, white paper clip on top printed in red and blue. Each piece in a cellulose wrapper.

Caramels:

Colors: Good.
Texture: Good.
Taste: Good.

Remarks: The best caramel whirls we have examined this year, at this price. Suggest bag be printed to improve the appearance.

REVIEW: Most caramel whirls we examine are hard and dry. This caramel whirl was very well-made and had a good flavor.

Code 10F4

Assorted Opera Gums

7¾ ozs.—29c

(Purchased in a chain grocery store, Oak Park, Ill.)

Appearance of Package: Fair.

Container: Cellulose bag, paper seal on top printed in red.

Drops:

Colors: Good.
Texture: Good.
Sugaring: Good.
Flavors: Good.

Remarks: The best opera gums we have examined this year. Very good flavors. Suggest bag be printed to improve appearance.

REVIEW: Opera gums as a rule contain very cheap flavors and many times are tough. These opera gums were well-made and good eating.

Code 10G4

Fruit Slices

7¾ ozs.—29c

(Purchased in a chain grocery store, Oak Park, Ill.)

Appearance of Package: Good.

Container: Tray printed in red and blue. Overall printed cellulose wrapper.

Slices:

Color: Good.
Texture: Good.
Sugaring: Good.
Flavors: Good.

Remarks: The best fruit slices we have examined this year at this price. Neatly packed and cheaply priced at 29c.

REVIEW: The workmanship on these slices was exceptionally good, also the quality. The flavors were very good.

Code 10J4

Butter Mints

8 ozs.—25c

(Purchased in a grocery store, Oak Park, Ill.)

Appearance of Package: Good.

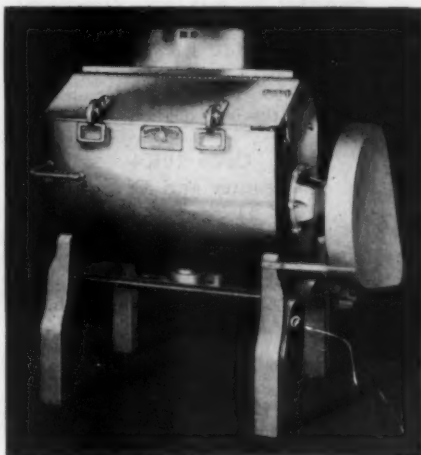
Container: Cellulose bag printed in green, yellow and white.

Mints:

Color: Good.
Texture: Good.
Flavor: Good.

for Better Marshmallows the SAVAGE BEATER

.... IS YOUR ANSWER. The Savage latest improved sanitary marshmallow beater is constructed with stainless steel tank, shaft, paddles and breaker bars—100% sanitary. This beater is considered standard by manufacturers. Built for strength and durability, it assures perfect manipulation of each batch. Hundreds of users in the United States and foreign countries prefer the Savage Beater for its economy in operation and performance in production, because it saves time, space, and operating cost. Four 200 pound Savage Beaters will supply a mogul for continuous operation.



THE FIRST COST IS THE LAST COST

- Unexcelled for volume and lightness
- Stainless construction—100% sanitary
- No corners for contamination
- Outside stuffing boxes—no leakage possible
- Maximum beating for volume
- Faster heat discharge from batch
- Creates volume suction of cold air
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- 6" outlet valve for quick emptying
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- Large two piece air vent—sanitary
- Direct motor drive
- Sizes available: 150 lb. or 80 gal. capacity
200 lb. or 110 gal. capacity

SAVAGE oval type marshmallow beater also manufactured with stainless water jacketed, galvanized cast iron heads, paddles and breaker bars.

Since 1855

SAVAGE BROS. CO.

2638 Gladys Ave.

Chicago 12, Ill.



Remarks: One of the best mints of this kind we have examined this year. A very good butter flavor.

REVIEW: We examine many sugar butter mints over the year and find most of them well-made, but containing very poor flavors. A butter flavor has to be carefully handled; the amount used is most important. These mints contained a good butter flavor and the right amount was used.

Code 10M4
Sugar Mints
4 ozs.—49c

(Purchased in a department store, Chicago, Ill.)

Appearance of Package: Good.

Container: Cellulose bag printed in blue and yellow.

Mints:

Color: Good.

Stripes: Good.

Texture: Good.

Flavor: Good.

Remarks: The best mints of this kind we have examined this year. Very good eating and a good peppermint flavor.

REVIEW: Many sugar mints we examine have a cheap mint flavor and are hard. These mints had a very good flavor, also a very good texture.

Code 10L4
Lemon Drops
9½ ozs.—25c

(Purchased in a chain grocery store, Oak Park, Ill.)

Appearance of Package: Fair.

Container: Cellulose bag, paper clip on top printed in yellow, white and red. Drops are wrapped in cellulose.

Drops:

Color: Good.

Molding: Good.

Gloss: Good.

Flavor: Good.

Remarks: The best lemon drops at this price we have examined this year.

REVIEW: Most lemon drops we examine have a cheap lemon flavor. The flavor used in these lemon drops was of the best quality.

Code 10K4
Caramel and Cream
11 ozs.—25c

(Purchased in a chain grocery store, Oak Park, Ill.)

Appearance of Package: Good.

Container: Tray, oblong shape, wrapped in printed cellulose. Colors red and white.

Caramels:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: One of the best caramel creams we have examined this year. Well packed and cheaply priced at 25c.

REVIEW: The workmanship on this piece was very good, also the quality. It made very good eating.

Code 10N4
Coconut Bon Bons
8 ozs.—49c

(Purchased in a chain drug store, Oak Park, Ill.)

Appearance of Package: Good.

Container: Folding box, oblong shape, cellulose window.

Bon Bons:

Colors: Pink is too bright, the balance of assortment is good.

Gloss: Good.

Center:

Color: Good.

Texture: Good.

Taste: Good.

Remarks: A good eating coconut bon bon; well-made. The best we have examined this year. Had a very good coconut flavor. Cheaply priced.

REVIEW: The centers in these coconut bon bons were very good, had a good flavor and a very good texture. The coating was soft.

Is your candy always on her shopping list?



If the flavor of your candy is "off" just once, your name won't be there next time she makes up her shopping list. She'll try another brand. That's why you've got to make sure that the color, the flavor, the texture of the chocolate you use *never changes*. You get that assurance when you use Wilbur chocolate coatings. Wilbur's "quality control" guarantees it.



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Mrs. Magnus Candy Cottage

**moves 1200 miles twice
a year to follow its cus-
tomers**

FINE CANDY, the product of nearly half a century in the confectionery business, linked with a continuing program of careful merchandising and promotion, has made Mrs. Magnus Homemade Candy, manufactured and sold in Orlando, Florida, and Tomahawk, Wisconsin, famous among both winter and summer vacationers.

Located on U. S. 17-92, one of Florida's major north-south highways, on the outskirts of one of Orlando's busiest shopping centers, the giant Candy Cottage box sign and glass front cottage with its colorful holiday displays, is a familiar location to thousands of winter visitors in the Central Florida winter playground.

The Magnus candies are the result of a venture into the business in 1919 in Columbus, Ohio, by the Littletons, Mrs. Magnus' parents.

"I started out in the selling business with shirts and bakery products," Mr. Littleton said, "but I got tired of trying to get my lines up front in the stores. I noticed candy always got a front-of-the-store spot and decided to get into that business."

Mr. Littleton began selling for a candy manufacturer and was happy with his front-of-the-store spots until he decided that instead of selling another man's line he would come up with bigger profits if he sold his own. His first sale was 100 pounds of butter

**Mr. and Mrs. Emil
Magnus in their Candy
Cottage at Orlando,
Florida.**



*your assurance
of uniform quality
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chocolate coatings
liquors and cocoas

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Fine Chocolate Since 1897

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*If you manufacture
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Use these 3 Penick & Ford Products:

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Prevents sugaring, improves color and flavor, retains moisture.

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Assures firm but tender gel texture, better clarity, longer shelf life.

3. Douglas Confectioners Special Moulding Starch

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BOSTON, NEW YORK, CHICAGO, LOS ANGELES, OAKLAND, SALT LAKE CITY, SEATTLE

creams, turned out at home on the kitchen stove in batches of about 20 pounds.

"I took the creams down to a drug store on some old wooden trays and they took the whole thing," Mr. Littleton said. "It was a good candy and it sold out in no time."

Mr. Littleton's original quality product turned out in small batches is characteristic of the firm's operation today.

The Littletons decided to retail under the name "Mrs. Littleton's Homemade Candies," as the best kind of label to emphasize their quality candy—the kind mother makes. "Most people seem to think a motherly type woman working in her own cottage kitchen turns out the best candy in the world," Mr. Littleton said. "We have always tried to capture that impression not only with our label, but with our location and, of course, our candy."

Started in the Twenties in Columbus, Mrs. Littleton's Homemade candies expanded to a seven-store operation with a wholesale business in Ohio, Pennsylvania and Virginia. Although the Littletons continued to turn out their candy in small batches, the operation grew to a business employing 55 persons, including eight dippers. The candy products expanded to more than 200 varieties, including creams, fudge, butter creams, caramels, nougats and sea foam.

In 1938 the Littletons sold out to move to Florida.

When the war ended, their daughter, Virginia, married Emil Magnus, recently discharged from duty in the Pacific with the Marine Corps and the Littleton candy operation became a second generation saga under the Mrs. Magnus Home Made Candies label.

"We opened in a downtown corner location in Orlando," Mrs. Magnus said, "but it wasn't satisfactory. Heavy downtown pedestrian traffic isn't the kind of business our operation attracts. We found our downtown location encouraged small drop-in sales, so we decided to move out of the downtown



Candy Cottage window put in after Halloween features gifts on right, packaged hard candies on left. Because window faces west and gets afternoon sun, display of soft candies is not practical despite air conditioning. Floor space in glassed-in porch is 30 by 10 feet.



The Candy Cottage exterior and interior are neat and clean, but deliberately do not offer glitter of modern architecture usually found in new Florida stores. Mrs. Magnus believes that a slick glittering building would detract from the cottage atmosphere and the impression of fine, old-fashioned candy made in cottage kitchens.

location and began looking for a spot in a commercial area near a shopping district."

In 1951 they moved into their Candy Cottage, a duplex on Route 17-92 where auto traffic is heavy and plenty of parking space is available.

The building was remodeled to include a glassed-in front porch for displays and the two living rooms were joined to form a sales room. Manufacturing equipment was set up in one side of the duplex, in the kitchen and dining room.

The setting is ideal for the kind of confections produced under the Magnus name, where quality still is protected by working in small batches. Creams are turned out in 20-pound batches and fudge never runs more than 10 pounds. Working with two dippers the kitchen turns out 176 kinds of candy.

The new location is marked by a giant-size replica of the Mrs. Magnus candy box standing on edge. An old fashioned mailbox with the Mrs. Magnus trademark was attractively painted and set on a post in front of the cottage. The front yard is lighted at night with floods mounted on two coconut palms. Good lighting in the front display windows not only adds to the cottage atmosphere but also shows off the displays to advantage.

The new location had the desired effect, Mrs. Magnus said. Winter visitors looking for local color stopped in to visit and quickly learned that Magnus candies were excellent.

Mrs. Magnus is quick to admit that although the Candy Cottage is in business for Central Florida year-around residents the operation is geared primarily to attract winter visitors.

"Our candy is expensive. We don't make any attempt to attract people who are looking for inexpensive candy, and the heavy traffic in winter visitors is, as a general rule, our best source of customers. They know good candy and they have the money to buy it," she said.

Goodwill Tour Of Europe

A group of candy men and women will leave on a friendly tour of candy factories and stores in Europe in 1955. The tour will leave New York right after Easter and return in time for the candy conventions in Chicago in June. Present plans are to visit Spain, Italy, Switzerland, Germany, Holland, Denmark, England and France. Sightseeing and shopping will be a main feature in each country.

The cost will be \$1900 from New York. Included is all first class transportation, best hotels, all tours and sightseeing, most of the meals, all special parties and first class return on the Queen Mary.

For names of those already planning to go, and other information, write or telephone at once to

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One of our outstanding specialties, imparting the character of the true fruit, a real fresh pineapple flavor.

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Accurately reproduces real coconut flavor. For all types of candy; a necessary ingredient wherever coconut is used; particularly valuable for reinforcing the flavor of shredded coconut.

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This preparation gives the flavor and aroma of the ripe red Banana to a remarkable degree.

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SPEAS COMPANY, General Offices, Kansas City 1, Missouri



The unique type of building near Tomahawk, Wisconsin, helps attract customers for both candy and souvenirs.

To protect their quality product, candy manufactured at the Candy Cottage is made with the same ingredients that went into the first Mrs. Littleton candies nearly 40 years ago, including pure cream, butter and chocolate. Mrs. Magnus says that she still deals with Merckens Chocolate House, buying chocolate now at nearly six times the price Mr. Littleton paid, about 13 cents a pound, when he first began dealing with the firm shortly after World War I.

Although Florida's winter weather is ideal, Mrs. Magnus learned that even with air conditioning in her sales room the summer heat was a rough hurdle.

"People just couldn't get our candy home," Mrs. Magnus said. "Even though we packed in insulated bags, our candy often lost its shape and appearance between our cottage and our customers' homes."

The answer was a double barreled one. Close the cottage in the spring and follow the tourists to the cooler northern climate.

In 1952 after a survey of northern summer vacation areas, the Orlando operation was shuttered for the summer and reopened in Mrs. Magnus Dutch Mill, seven miles north of Tomahawk, Wis., on U. S. Highway 51.

"The location was another natural for us," Mrs. Magnus said. The building was unique, attracting immediate attention in its own right. The attraction, coupled with the fine Magnus candy was an immediate success.

But it became obvious shortly after they opened that the candy business in Wisconsin was not the same as in Florida. Florida tourists demand more show, more fancy wrappings than the Wisconsin vacationers, Mrs. Magnus said. Florida tourists want set up boxes and candy packed in cups. In Wisconsin the woodsy, outdoor atmosphere rejects the set up boxes in favor of folding cartons. Customers frequently ask for their candy to be bagged, an unheard of condition in Florida.

"People probably would feel insulted if we sold them candy in a set up box in Wisconsin," Mrs. Magnus said.

During the first season in the Dutch Mill Mrs. Magnus decided to try a limited line of gifts and souvenirs. The previous year visitors in the Candy Cottage, spotting wicker baskets used for packing and shipping gift boxes of candy had bought the baskets as gifts.

Mrs. Magnus found the gifts were eagerly bought by the class of customers attracted not only by the unique mill, but also by the fine candy.

In 1953, returning to reopen the Candy Cottage, Mrs. Magnus expanded her giftwares to include costume jewelry, women's handbags and unique items of wearing apparel and decorative items.

"The gifts are a good sideline, but we must be careful to stock merchandise that isn't 'run of the mine' and items that don't look cheap," she emphasized. "A cheap line of souvenirs would detract from our candy very quickly, regardless of its quality," she said.

Although the Dutch Mill is not heavily promoted, the Candy Cottage is the center of a merchandising program that includes newspaper, radio and stunts.

"A heavy share of our customers are visitors so that we advertise to attract them as well as the year-around residents," Mrs. Magnus said.

A great deal of attention is directed at the appearance of the cottage to keep it neat and clean. Signs, the mailbox, and other painted objects are given a fresh coat of paint every year. Lawns and shrubbery are kept well trimmed and green. The front windows are completely redecorated for each of the major holidays through the winter season, starting with Halloween and working on through Thanksgiving, Christmas, Valentine's Day and Easter.

The cottage opens about 9 a.m. and closes about 9 p.m.



All glass candy counters in sales room are directly opposite entrance so the broad display of soft candies is the first merchandise customers see. Gifts are arranged on wall shelves and stands along both side walls and front wall. Gifts not only are a profitable sideline, but also add atmosphere to shop. Floor covering is woven grass squares. Sales room, 35 by 20 feet, is illuminated by two large fluorescent fixtures.

FUNSTEN'S 60th Anniversary

Finest

SHELLED PECANS

EASTERN BLACK WALNUTS

Now Funstenized...

for your added protection. A process to destroy insect eggs and reduce bacteria and mold spores to negligible quantities when packed.

For prices and terms, see your local Funsten broker or write:

R. E. FUNSTEN CO.

1515 Delmar, St. Louis 3, Mo.

"Highest Quality for 60 Years"

"We have found customers like to go out for a drive after dinner, or for a walk, and they frequently stop by to pick up a box of candy," Mrs. Magnus said.

The firm's newspaper advertising in Orlando is geared to the two newspapers' Business Review section which features groups of local concerns on a special full page. The cottage gets a picture and story for each of the holidays.

The Candy Cottage radio promotion includes two shows. Mrs. Magnus sponsors a weekly news-in-review show and arranges for spots for special shows as they develop from week to week.

Radio promotion features the Candy Cottage fine candies and plays up the service to special parties including all kinds of specialties from storks on mints for stork showers to flowers on sugar cubes or strawberries in bon bon creams.

"We'll work with them to make anything they want," Mrs. Magnus said.

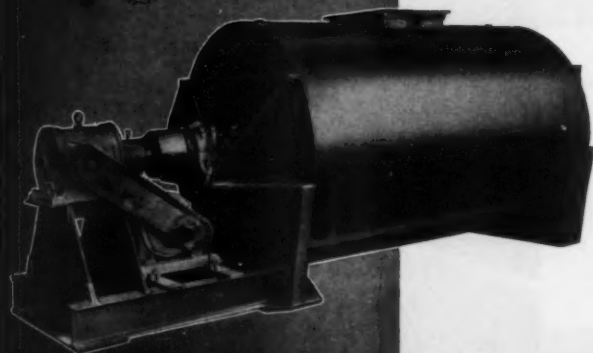
Promotion also extends to the Orlando schools where Mrs. Magnus has sponsored essay contests on such subjects as "Why I Like Mrs. Magnus Home Made Candies." The program also includes tours of the cottage and kitchens for school classes.

Although Mrs. Magnus has not used billboards she is considering a series of boards on the highway.

This type of operation, following the crowds of vacationers, makes for an exceptionally busy life. It is the way for anyone, if they can stand the gaff, to get the most out of the candy business.

Dark and Light Chocolate in One Mixer

**Only Stehling offers you a
2-COMPARTMENT MIXER**



A vertical center partition divides the Stehling 2-compartment chocolate mixer. Each compartment has separate agitators.

Users work dark chocolate in one compartment, light chocolate in the other; or melt and mix in one while drawing off the other.

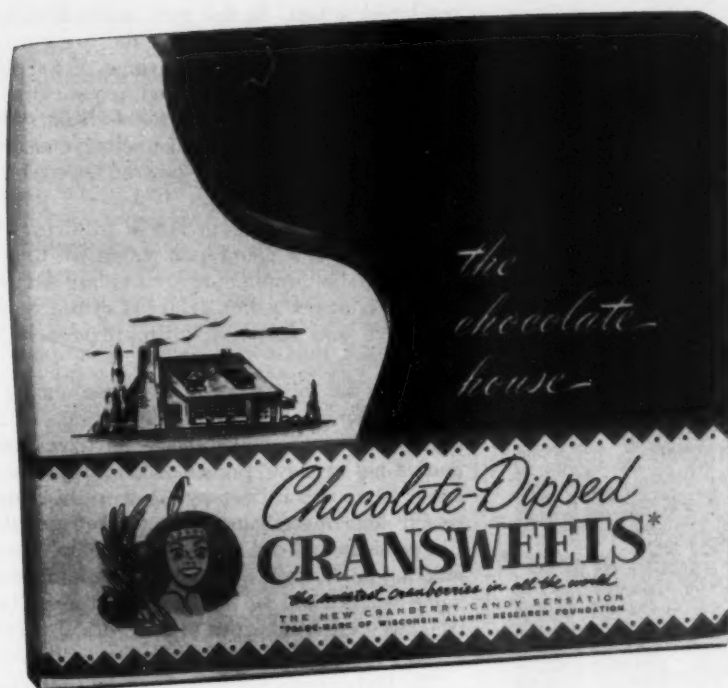
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CRANSWEETS

A New Candy Ingredient

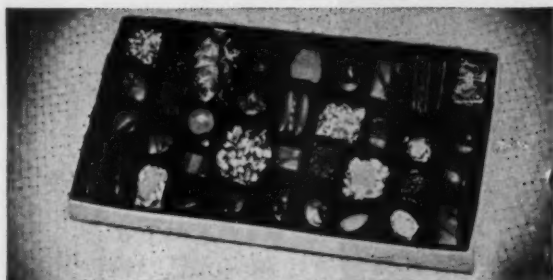
by STANLEY ALLURED

IT is rare indeed when a brand new candy ingredient becomes available to the candy maker. Such is the case this fall, however, as Cransweets® are just being introduced for general distribution to the trade. Cransweets is the name chosen to best describe a whole, preserved cranberry, with its natural color and flavor intact.

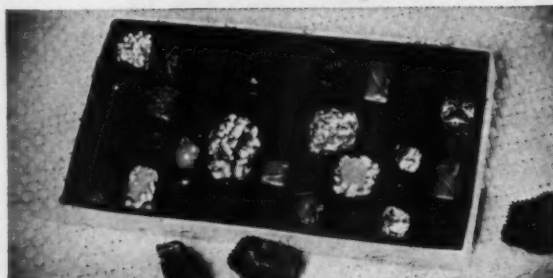
The first candy with Cransweets was put on the market just a few weeks ago, as cordials, and there will be more as other firms have been working with these fruits to try to find formulas that take the best advantage of the cranberry flavor and texture.

The development that made these fruits possible came at the University of Wisconsin. Kenneth G. Weckel, professor of the Dairy and Food Industries, worked out a method of preserving the whole fruit, yet retaining its natural color, and most of its flavor. Previously, the only methods known involved heating the fruit, which caused its thick skin to rupture and

for flavors



that bring



them back



for more!

GIVAUDAN FLAVORS have helped many confectioners and ice cream manufacturers build new business and increase their repeat sales on the basis of truly distinctive taste appeal.

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produced a jam. In the new method each berry is pierced to provide a path for the sugar syrup which preserves the fruit and cuts some of its typical tartness. The berries are processed in a vacuum chamber, and emerge as firm, plump, whole fruit, sweeter than before, yet retaining the distinctive cranberry flavor and color. No artificial preservatives, color or flavor are used.

Cransweets will be available in sizes which will make possible a count per gallon of 1300 to 3300. They will be supplied at a standard six pounds of drained fruit per gallon. The pH of the syrup will be about 3.5 and will contain approximately 45% cane sugar solids.

Patents for the process were taken out by the Wisconsin Alumni Research Foundation, a non-profit organization which handles the development and marketing of new processes and inventions which come from the University. It was this organization which first investigated the market possibilities of this product, and did the market research on consumer reaction, and finally chose the name Cransweets. This name was picked as the best to express the phrase, "the sweetest cranberries in the world," which is used in connection with the fruit however it is marketed.

The first approaches to industry with the new product were made several months ago, among candy makers, bakers and ice cream makers. The most obvious way to market this fruit in candy form was in cordial form and this method was tried by several candy firms. The result was that this fall two firms were ready to market Cransweets. Maronn Candies of Milwaukee marketed them as cordials, and the Borden Company of Milwaukee marketed a Cransweet Sherbet. Since cranberry growing is a major Wisconsin industry, quite a bit of publicity was generated to help this initial marketing push.

Up to this writing, only one firm has received a license to produce under the WARF patents, and are just now beginning to turn out the product in quantity. Plans are not to make exclusive licensing agreements, but to allow licenses to all interested fruit processors.

Maronn experimented for several months before hitting on a formula that proved satisfactory. In cordials it was found that the fruit did not carry enough flavor to carry through the syrup, so that an artificial flavor was needed to fortify it. However, Maronn found that one of the first reactions of customers was the naturalness of the flavor of their cordials, probably caused as much by the natural texture as the flavor. Cransweets are of course considerably smaller than cherries, so that the cordial pieces are a comparative expensive piece. It was also found that these berries cordialled slower than cherries, and therefore had to be stored a little longer.

Maronn has several retail stores in and near Milwaukee, and in addition supply Schuster's department stores with their private brand chocolates. Cransweets first went on sale in the Schuster stores on November 13th, and the Maronn stores, called The Chocolate House, on November 17th. Reflecting the city's conservatism, most of the initial sales were in half-pound

boxes. The retail prices for this introduction were \$1.60 per pound in The Chocolate House stores and \$1.50 in the Schuster stores.

Consumer reactions are available now from only the first week of sales. Besides the natural flavor which consumers seem to like, they also seem to like the slight tartness which makes them better eating than cherries, which are too sweet for many people. Charles Phiringer of Maronn is quite confident that this cordial will retain a permanent place in their line. As soon as production catches up with their sales, a piece of these Cransweets will become a part of their Fruit and Nut assortment. Other pieces are planned in which to test this new product, to find places where its flavor and texture will fit into other types of candies.

There is no way of knowing yet just what consumers will think of this product. But it is a safe bet that if candy makers show their historical bent toward innovation and experimentation, Cransweets will find their way into many different types of candies, and will find a permanent place somewhere in the industry.

If you would like some samples to work with, write to:

M. D. Woerpel,

Wisconsin Alumni Research Foundation

506 N. Walnut Street

Madison 1, Wisconsin.



6000 to 6500 lbs. per hour
of 6X powdered sugar is easily produced with the
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If you have need for constant high production of powdered sugar, by all means investigate the 28" Schutz-O'Neill Superfine Pulverizer. It easily turns out 6000 to 6500 lbs. per hour of 6X powdered sugar with uniform fineness, using a 75 H.P. motor. Carry granulated sugar in stock,—make fresh powdered sugar as needed.

EXTRA EQUIPMENT: Automatic Starch Feeder will thoroughly mix any desired percentage of starch with powdered sugar.

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FOR SALE: 1-32" Greer Enrober with a 65' long Benz Cooling Tunnel; 2-1,000 lb. National Equipment Chocolate Kettles; 1-500 lb. Stainless Steel Greer Chocolate Kettle; 1-800 lb. Duplex Chocolate Kettle; 2-Lynch Wrappomatics, together with card feed roll, with electric eye; 2-Hudson Sharpe (Campbell 2 W 6) Wrapping Machines, with electric eye; 1-D.F. Package Wrapping Machine, with electric eye; 3-120 Quart Glenn Beaters (American Machine Foundry), together with rollers and beaters; 1-2 Barrel Reade Dough double arm creamer; 1-Anderson 2-Way Cutting Machine (vertical and horizontal) together with bar separator; 1-Hohberger Continuous Cooker (13,000 to 15,000 lbs. per day), complete with pumps and motors (no pre-melt kettles). 3-450 Gallon Stainless Steel double jacket kettles—125 lb. pressure; 1-Overhead Travelling Crane with 500 lb. electric lift, together with 75' of travelling track and a 350 lb. Stainless Steel dump truck; 1-Brach Candy Cutter with Motor; 1-10 S H P Mears Kane Boiler (14 ton capacity) gas; 1-Werner Ball Machine—Automatic. Apply box 1146, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Hudson Sharp Box Wrapper, 43/16 x 1 1/4 x 13/16 for wax paper or cellophane, electric eye. Lynch large Mint Wrappers with electric eye. Box 1147, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Tray Lock Machines type TL-B-EL, end lock. Also several TLA machines for setting up and side locking. All units in good order. Box 1149, **The MANUFACTURING CONFECTIONER.**

FOR SALE: 4' BALL CREAM BEATER Savage Bros. motor driven \$275.00. ALSO CHOCOLATE MELTER 150 lbs. capacity complete with single phase motor agitator and gas burner \$250.00. Both machines guaranteed to be in perfect condition. **TAYLOR'S TROPICAL SWEETS, Davenport, Fla.**

MACHINERY FOR SALE

FOR SALE: 300-lb. Racine Melters, Dublin and Savage Caramel Cutters (practically new). Box 1148, **The MANUFACTURING CONFECTIONER.**

FOR SALE: Cut Roll Hand Roll Machine in good condition now using 110 watt motor. \$700.00 make offer. **NACKS CANDIES, 7276 National Bridge Road, St. Louis 21, Missouri.**

HELP WANTED

REPRESENTATIVES WANTED for a line of popular molded chocolate novelties. Attractive molded figures available for Valentine, Easter, Halloween, Thanksgiving and Christmas. This line does not conflict with box or bulk chocolate lines. If you are calling on department stores and better candy outlets, this is a chance to earn extra commissions. A few territories still open. Write at once to Box 1042, **The MANUFACTURING CONFECTIONER.**

WANTED AT ONCE: Manager for small chain of candy shops. Wonderful opportunity for thoroughly experienced man. Write in full detail, and in confidence, stating starting salary, age, etc. Address: **HENRY COBBS, Personal, Box 1, Little River Station, Miami 38, Fla.**

CANDY MAKER: Experienced in all phases of candy production, with broad knowledge of fondant manufacture, butter-cream centers, and coatings. The responsibilities in connection with this position will consist primarily of research on confectionery products allied to the baking industry. Box 1244, **The MANUFACTURING CONFECTIONER.**

REPRESENTATIVE WANTED to handle line of starch trays on commission basis. Box 243, **The MANUFACTURING CONFECTIONER.**

EXPERIENCED MOGUL OPERATOR wanted, needed at once. Apply: **SISCO-HAMILTON COMPANY, 514 South Loomis Street, Chicago 7, Illinois.**

WANTED: Young man to train for management. Candy Plant. Technical or practical experience desirable. Box 1242, **The MANUFACTURING CONFECTIONER.**

MISCELLANEOUS

FOR SALE: Candy store, Retail, Wholesale, Mfg. Est. 1914. Good downtown location. Good 5 year lease. Wonderful opportunity for candy man. Write for details. **CACTUS CANDY SHOP, 258 East Congress, Tucson, Arizona.**

FOR SALE: Smaller midwest chocolate package goods plant—owner retiring—good start for younger man. Also few extra pieces of machinery for sale—12 Outlet Extruder & Depositor—Reed Beater—Sucker Machine—MM Beater. Box 1143, **The MANUFACTURING CONFECTIONER.**

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I HAVE HAD EXPERIENCE in the finest chocolate factories in Germany, in Felscke and Stollwerck as superintendent. I know the process of chocolate manufacturing thoroughly from the bean through to finished products. I also know manufacturing process of most candy products, such as marzipan and nougat. I would like to make contact with a large firm in the United States for employment. Box 1145, **The MANUFACTURING CONFECTIONER.**

EXPERT TECHNOLOGIST, foreman in all types candy and chocolate pan line including M & M candy chicle gum and ball gum. This includes production from start to finish. Also specialize in bubble gum base. I will teach gum base manufacture anywhere including foreign countries. Box 948, **The MANUFACTURING CONFECTIONER.**

CANDY, FOOD TECHNOLOGIST, with wide experience in the development, production, and technical control of a complete line of confectionery and chocolate products, as well as numerous other foods, desires a position of responsibility to fully use his ability. Box 1241, **The MANUFACTURING CONFECTIONER.**

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We offer years of experience in successfully selling, merchandising and servicing all accredited **JOBBERS, CHAINS, SUPERS, THEATRES, VENDORS, and DEPARTMENT STORES** in the Metropolitan N. Y. C. and Northern N. J. area. We now seek an additional non-competitive line on a brokerage basis. We can arrange to guarantee credits, or invite you to avail yourself of our facilities to invoice and finance our own accounts. Write Box 1243, **THREE EXPERIENCED SALESMEN OF INTEGRITY, The MANUFACTURING CONFECTIONER.**

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1954 Editorial Index

Book Reviews

Cocoa, Eileen M. Chatt (p. 48), August
Cocoa Bean Tests, Gordian—Max Rieck (p. 45), August
Elements of Food Engineering, Volume 2 (p. 24), November
Getting Down to Cases (p. 26), November
Gloss, Its Definition and Measurement, V. G. W. Harrison (p. 46), August
Sales Forecasting (p. 26), November
Starch, Charles A. Brautlecht (p. 41), March
The Chemical Senses, R. W. Moncrieff (p. 41), March

Candy Clinic

Bar Goods; 5c Numbers (p. 41), September
Chewey Candies; Caramels; Brittles (p. 59), February
Cordial Cherries; Panned Goods; 1c Pieces (p. 45), November
Easter Candies and Packages; Moulded Goods (p. 45), May
Gums, Jellies and Undipped Bars (p. 49), July
Holiday Packages; Hard Candies (p. 49), January
Marshmallows, Fudge (p. 94), June
\$1.00 and Up Chocolates; Solid Chocolate Bars (p. 45), April
One Pound Assorted Chocolates; Up to \$1.00 (p. 45), March
Salted Nuts; 10c-15c-25c Packages (p. 51), October
Summer Candies and Packages (p. 57), August

Candy Packaging Clinic

(p. 22), February

Chocolate and Compound Coatings

Confectionery Sales and Distribution (p. 40), October
Factors to be Considered in Choosing a Confectioners Coating (p. 17), September
Fondant Sugar in Chocolate Manufacturing (p. 15), February
Highlights of the NCA & AACT Conventions (p. 54), July
How Welch's Profits from Humidity Control (p. 29), September
Manufacturing Compound Coatings at Curtiss (p. 27), May
Milk Chocolate Technology (p. 35), June
Packaging from the Belt at Johnstons (p. 36), October
Proceedings of the Eighth PMCA Production Conference (p. 31), June
Report on Candy Research (p. 37), September
Soft-Grained Sugar for Making Chocolate (p. 17), August

The Control of Gloss on Hard Butter Coatings (p. 76), June
The Flavor of Chocolate (p. 17), November
The Handling and Delivery of Liquid Chocolate (p. 89), June
Viscosity in the Chocolate Industry (p. 19), December

Confectionery Industry

Alikonis Wins Stroud Jordan Medal (p. 14), May
Confectionery Sales and Distribution (p. 40), October
Directory of Exhibitors (p. 57), June
Directory of Foreign Equipment (p. 22), January
Highlights of the NCA & AACT Conventions (p. 54), July
NCA Convention and Exposition (p. 13), May
NCA Convention and Program (p. 27), June
NCA Exposition Plan (p. 56), June
Proceedings of the PMCA Production Conference (p. 30), June
Program of the Pennsylvania Production Conference (p. 6), February

Editor's Column

(p. 6), January; (p. 6), February; (p. 6), March; (p. 6), September; (p. 6), November

Handling Materials

Bulk Sugar in Unit Containers (p. 26), July
Manufacturing Compound Coatings at Curtiss (p. 27), May
Mechanical Handling of Bulk Sugar (p. 24), July
Pneumatic Conveying of Sugar (p. 31), July
The Bulk Sugar Picture—a Resumé (p. 21), July
The Control of Gloss on Hard Butter Coatings (p. 76), June
The Handling and Delivery of Liquid Chocolate (p. 89), June
The Viscosity of Cooked Confections and its Practical Significance (p. 17), November

Ingredients

A New Ingredient, Cransweets (p. 65), December
Almond Paste Candies (p. 55), February
Antioxidants in Candy and Candy Packaging (p. 47), June
Coconut Candies (p. 17), January
Factors to be Considered in Choosing a Confection Coating (p. 17), September
Fondant Production at Kimbells (p. 40), January
Fondant Sugar in Chocolate Manufacturing (p. 15), February

Fudge (p. 49), March; (p. 50), April
 Highlights of the NCA & AACT Conventions
 p. 54), July
 How do You Judge a Whipping Agent? (p. 13),
 July
 Manufacturing Compound Coatings at Curtiss
 (p. 27), May
 Milk Chocolate Technology (p. 35), June
 Nut Candies (p. 48), May; (p. 57), July; (p. 59),
 August; (p. 51), September
 Proceedings of the Eighth PMCA Production Con-
 ference (p. 30), June
 Progress in Candy Research (p. 16), July
 Report on Candy Research (p. 36), September
 Soft-Grained Sugar for Making Chocolate (p. 17),
 August
 The Control of Gloss on Hard Butter Coatings
 (p. 76), June
 The Flavor of Chocolate (p. 17), November
 The Function of Carbohydrates in Confections
 (p. 15), March
 The Handling and Delivery of Liquid Chocolate
 (p. 89), June
 Try More Coconut Items (p. 15), May
 Try Raisins for New Candy Ideas (p. 11), April

Letters to the Editor

(p. 8), November

Management

Confectionery Sales and Distribution (p. 40),
 October
 Directory of Foreign Equipment (p. 22), January
 Fondant Production at Kimbell's (p. 40), January
 Fondant Sugar in Chocolate Manufacturing (p.
 15), February
 How a Local Chain Competes with the Nationals
 (p. 47), November
 How Mars Promotes Public Relations (p. 52), July
 Manufacturing Compound Coatings at Curtiss
 (p. 27), May
 New Designs for Fanny Farmer Shops and Pack-
 ages (p. 23), April
 Showmanship Establishes New Candymaker (p.
 24), March
 Soft-Grained Sugar for Making Chocolate (p. 17),
 August
 Teaching Youth the Meaning of Profits (p. 51),
 August
 The Candy Maker's Place in Manufacturing for
 Retail (p. 54), November
 The Flavor of Chocolate (p. 17), November
 The Hannover Fair (p. 38), July
 The Techniques of Using Road Signs (p. 33),
 March

Manufacturing Retailer

A Well Designed Candy Shop (p. 55), October
 Almond Paste Candies (p. 55), February
 Coconut Candies (p. 17), January
 Feature Fall Candies (p. 60), October
 Fudge (p. 49), March; (p. 50), April

How a Local Chain Competes with the Nationals
 (p. 47), November
 How Pease Moved His Shop and Kept His Cust-
 omers (p. 47), September
 New Designs for Fanny Farmer Shops and Pack-
 ages (p. 23), April
 Nut Candies (p. 48), May; (p. 47), July; (p. 59),
 August; (p. 51), September
 Showmanship Establishes New Candy Maker (p.
 24), March
 The Candy Maker's Place in Manufacturing for
 Retail (p. 54), November
 Mrs. Magnus' Candy Cottage (p. 59), December
 The Techniques of Using Road Signs (p. 33),
 March
 Try More Coconut Items (p. 15), May
 Try Raisins for New Candy Ideas (p. 11), April

Packaging

AMA Packaging Exposition (p. 47), February
 Antioxidants in Candy and Candy Making (p. 47),
 June
 Candy Box Insert (p. 16), July
 Cellophane for Candy Packaging (p. 26), February
 Confectionery Sales and Distribution (p. 40),
 October
 Highlights of the NCA & AACT Conventions
 (p. 55), July
 How a Local Chain Competes with the Nationals
 (p. 47), November
 New Designs for Fanny Farmer Shops and Pack-
 ages (p. 23), April
 New Developments in Packaging Materials (p. 35),
 August
 New Packages (p. 42), February; (p. 28, 38),
 August; (p. 34), October
 Packing from the Belt at Johnston's (p. 36),
 October
 Polyethelyene for Candy Packaging (p. 49),
 February
 Proceedings of the Eighth PMCA Production Con-
 ference (p. 32), June
 Some Problems of the Food Technologists (p. 31),
 December
 What to Expect from a Corrugated Shipping
 Container (p. 41), June
 Winners in the Annual Folding Carton Compet-
 ition (p. 28), April

Patents

Agents for Preventing Loss of Gloss in Candy
 Coatings (p. 40), May
 Apparatus for Filling Bags (p. 36), January
 Apparatus for Producing Fondant Material for
 Candy Manufacture (p. 41), May
 Apparatus for the Production of Chocolate Pastes
 Ready for Subsequent Treatment on Roll Re-
 finers (p. 42), May
 Candy Bar or Similar Article (p. 36), January
 Candy Coloring Composition and Process of Pre-
 paring Same (p. 40), November

Combined Confection and Whistle (p. 40), April
 Confection Machinery (p. 37), January
 Confection Package and Toy Structure (p. 37), January
 Continuous Mold-Forming Apparatus (p. 41), July
 Device for Dropping Creamy Substance in Making Candy Wafers (p. 40), May
 Method and Apparatus for Producing Wrapped Articles (p. 32), March
 Method and Device for Conching Chocolate Mass and the Like (p. 40), April
 Method for Making Confections (p. 35), January
 Method of Refining Raw Cocoa and Raw Masses Made Therefrom (p. 32), March
 Process for Making Candies, Confections, Icings and the Like, and the Resulting Product (p. 36), January
 Process for Manufacturing Confections (p. 35), January
 Process of Making a Confectionery of the Gum-drop Type (p. 41), July
 Processing of Cocoa Beans (p. 40), November
 Some Problems of the Food Technologists (p. 31), December
 Vacuum System of Manufacturing Chocolate Shells (p. 41), May

Production

A New Batch Roller Heater (p. 38), January
 A Simple Procedure for Determining Cook Temperature with Vacuum, in Open Kettles and Under Pressure (p. 23), October
 Almond Paste Candies (p. 55), February
 Antioxidants in Candy and Candy Packaging (p. 47), June
 Bulk Sugar in Unit Containers (p. 26), July
 Cellophane for Candy Packaging (p. 26), February
 Coconut Candies (p. 17), January
 Directory of Foreign Equipment (p. 22), January
 Factors to be Considered in Choosing a Confectioners Coating (p. 17), September
 Fondant Production at Kimbell's (p. 40), January
 Fondant Sugar in Chocolate Manufacturing (p. 15), February
 Fudge (p. 49), March; (p. 50), April
 Highlights of the NCA & AACT Conventions (p. 54), July
 How Do You Judge a Whipping Agent? (p. 13), July
 How Welch's Profits from Humidity Control (p. 29), September
 Manufacturing Compound Coatings at Curtiss (p. 27), May
 Mechanical Handling of Bulk Sugar (p. 24), July
 Milk Chocolate Technology (p. 35), June
 NCA Convention Program (p. 27), June
 New Developments in Packaging Materials (p. 35), August
 Nut Candies (p. 48), May; (p. 57), July; (p. 59), August; (p. 51), September
 Packaging from the Belt at Johnstons (p. 36), October

Polyethylene for Candy Packaging (p. 49), February
 Pneumatic Conveying of Sugar (p. 31), July
 Proceedings of the Eighth PMCA Production Conference (p. 30), June
 Production Conference PMCA Program (p. 6), February
 Progress in Candy Research (p. 16), July
 Report on Candy Research (p. 36), September
 Soft-Grained Sugar for Making Chocolate (p. 17), August
 Studies on the Shelf-Life of Coconut Bars (p. 83), June
 The Bulk Sugar Picture—a Resumé (p. 21), July
 The Control of Gloss on Hard Butter Coatings (p. 76), June
 The Function of Carbohydrates in Confections (p. 15), March
 The Handling and Delivery of Liquid Chocolate (p. 89), June
 The Hannover Fair (p. 38), July
 Try More Chocolate Items (p. 15), May
 Try Raisins for New Candy Ideas (p. 11), April

Research

A Simple Procedure for Determining Cook Temperature with Vacuum, in Open Kettles and Under Pressure (p. 23), October
 Antioxidants in Candy and Candy Packaging Materials (p. 47), June
 Factors to be Considered in Choosing a Confectioners Coating (p. 17), September
 Fondant Sugar in Chocolate Manufacturing (p. 15), February
 Highlights of the NCA & AACT Conventions (p. 54), July
 How Do You Judge a Whipping Agent? (p. 13), July
 New Developments in Packaging Materials (p. 35), August
 Proceedings of the PMCA Production Conference (p. 30), June
 Progress in Candy Research (p. 16), July
 Report on Candy Research (p. 36), September
 Soft-Grained Sugar for Making Chocolate (p. 17), August
 Studies on the Shelf-Life of Coconut Bars (p. 83), June
 The Control of Gloss on Hard Butter Coatings (p. 76), June
 The Function of Carbohydrates in Confections (p. 15), March
 The Viscosity of Cooked Confections and Its Practical Significance (p. 17), November
 Try More Coconut Items (p. 15), May
 Try Raisins for New Candy Ideas (p. 11), April
 Viscosity in the Chocolate Industry (p. 19), December

Sugar

Bulk Sugar in Unit Containers (p. 26), July
Fondant Sugar in Chocolate Manufacturing (p. 15), February
Highlights of the NCA & AACT Conventions (p. 55), July
Mechanical Handling of Bulk Sugar (p. 24), July
Pneumatic Conveying of Sugar (p. 31), July
Proceedings of the Eighth PMCA Production Conference (p. 30), June
Report on Candy Research (p. 36), September
Soft-Grained Sugar for Making Chocolate (p. 17), August
The Function of Carbohydrates in Confections (p. 15), March
The Bulk Sugar Picture—a Resumé (p. 21), July

Technical Literature Digests

(p. 42 and 43), March; (p. 45 and 48), August, (p. 24), November

What's New in Candy Equipment?

(p. 41, 42), January; (p. 31, 32), May; (p. 42, 43, 44), July; (p. 26, 39), September; (p. 38, 39), November

What's New in Candy Packaging?

(p. 37, 40, 41), February; (p. 68), June; (p. 43, 44), July; (p. 43, 44), August; (p. 46, 49), October; (p. 36, 37), November

1954

Author's

Index

Justin J. Alikonis

The Control of Gloss on Hard Butter Coatings (p. 76), June
The Function of Carbohydrates in Confections (p. 15), March

Stanley E. Allured

A Well Designed Candy Shop (p. 55), October
A New Ingredient, Cransweets (p. 65), December

Fondant Production at Kimbell Candy Co. (p. 40), January
How Mars Promotes Public Relations (p. 52), July

Manufacturing Compound Coating at Curtiss (p. 27), May

Packaging Chocolates from the Belt at Johnston (p. 36), October

John F. Bertuccio

Mechanical Handling of Bulk Sugar (p. 24), July

Roy Binder

Try Raisins for New Candy Ideas (p. 11), April

Graham T. Brown

Try More Coconut Items (with Charles B. deMaya (p. 15), May

Charles H. Carpenter

What to Expect from a Corrugated Shipping Container (p. 41), June

H. B. Cosler

Studies on the Shelf-Life of Coconut Bars (p. 83), June

Charles B. deMaya

Try More Coconut Items (with Graham T. Brown) (p. 15), May

Arne H. Gudheim

A Simple Procedure for Determining Cook Temperature with Vacuum in Open Kettles and Under Pressure (p. 23), October

The Viscosity of Cooked Confections and Its Practical Significance (p. 29), November

Roscoe R. Heard, Jr.

Pneumatic Conveying of Sugar (p. 31), July

R. Henika

How Do You Judge a Whipping Agent? (with J. Reger & H. Tengquist) (p. 13), July

A. J. Kegan

Some Problems of the Food Technologists (p. 31), December

Norman W. Kempf

Factors to Be Studied when Evaluating and Using Confectioner's Coating (p. 17), September

Dr. J. Kleinert

Viscosity in the Chocolate Industry (p. 19), December

J. Koch

Fondant Sugar in Chocolate Making (p. 15), February
The Flavor of Chocolate (p. 17), November

M. C. Staff Reports

A New Batch Roller Heater (p. 38), January
Directory of Foreign Equipment Manufacturers with Their U. S. Agents (p. 22), January
Feature Fall Candies (p. 60), October
Highlights of the NCA & AACT Conventions (p. 54), July

How a Local Chain Competes with the Nationals (p. 47), November
 How Pease Moved His Shop and Kept His Customers (p. 47), September
 New Designs for Fanny Farmer Shops and Packages (p. 23), April
 Proceedings of the Eighth PMCA Production Conference (p. 30), June
 Showmanship Establishes New Candy Maker (p. 24), March
 Teaching Youth the Meaning of Profits (p. 51), August
 Techniques for Using Roadside Signs (p. 33), March
 The Candy Maker's Place in Manufacturing for Retail (p. 54), November
 Winners in the Folding Carton Competition (p. 28), April

Lawrence F. Martin

Report on Candy Research (p. 36), September

Edward W. Meeker

The Bulk Sugar Picture—a Resumé (p. 21), July

J. C. Musser

Milk Chocolate Technology (p. 35), June

Warren L. Newcomer

The Handling and Delivery of Liquid Chocolate (p. 89), June

Edward A. Pagels

Bulk Sugar in Unit Containers (p. 26), July

M. G. Reade

The Hannover Fair (p. 38), July

J. Reger

How Do You Judge a Whipping Agent (with R. Henika & H. Tengquist) (p. 13), July

Walter Richmond

Almond Paste Candies (p. 55), February
 Coconut Candies (p. 17), January
 Manufacturing Methods and Formulas for Fudge (p. 49), March and (p. 50), April
 Manufacturing Methods and Formulas for Nut Candies (p. 48), May; (p. 57), July; (p. 59), August and (p. 51), September

Frank J. Rubinate

New Developments in Packaging Materials (p. 35), August

Fred W. Spannagel

Cellophane for Candy Packaging (p. 26), February

B. N. Stuckey

Antioxidants in Candy and Candy Packaging Materials (p. 47), June

Warren Tauber

Polyethylene for Candy Packaging (p. 49), February

H. Tengquist

How Do You Judge a Whipping Agent? (with R. Henika & J. Reger) (p. 13), July

Charles W. Vaughan

How Welch's Profits from Humidity Control (p. 29), September

Robert Whympner

Soft-Grained Sugar for Making Chocolate (p. 17), August

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INDEX TO ADVERTISERS

In The MANUFACTURING CONFECTIONER

Advertisements of suppliers are a vital part of the industrial publication's service to its readers. The following firms are serving the readers of The MANUFACTURING CONFECTIONER by placing their advertisements on its pages. The messages of these suppliers are certainly a part of the literature of the industry.

Advertising space in The MANUFACTURING CONFECTIONER is available only to firms supplying equipment, materials, and services for the use of confectionery manufacturers. Advertising of finished confectionery products is not accepted.

★ ★ ★

RAW MATERIALS

Ambrosia Chocolate Company..... 51	Felton Chemical Company, Inc..... 9	The Nulomoline Div. American Molasses Co. Nov. '54
American Food Laboratories, Inc. Second Cover	Fritzsche Brothers, Inc. 4	Penick & Ford, Ltd., Inc..... 56
American Sugar Refining Co. Oct. '54	R. E. Funsten Company..... 60	Pfizer, Chas., & Co., Inc... Third Cover
Anheuser-Busch, Inc. 15	Givaudan Flavors, Inc..... 62	Refined Syrups & Sugars, Inc. 13
Armour & Company 63	Gunther Products, Inc..... July '54	Speas Company 58
The Aromanilla Co., Inc..... Nov. '54	Hooton Chocolate Co..... 56	Staley, A. E., Mfg. Company Nov. '54
Atlas Powder Co. Nov. '54	Hubinger Co., The..... Nov. '54	Stange, Wm. J., Co..... 48
The Best Foods Co..... 10	Walter H. Kansteiner Company... 52	Sunkist Growers 14
Blanke-Baer Extract and Preserving Co. June '54	Kohnstamm, H., & Company, Inc. 11	Union Starch & Refining Co. Sept. '54
W. J. Bush & Co..... 58	Merckens Chocolate Company, Inc. 56	Howard Vair 58
California Almond Growers Exchange 17	National Aniline Division, Allied Chemical & D'e Corporation Nov. '54	Van Ameringen-Haebler, Inc..... 12
Clinton Foods, Inc..... Nov. '54	Nestle Company, Inc., The... Nov. '54	White Stokes Company..... Nov. '54
Dodge & Olcott, Inc..... 18	Neumann, Buslee & Wolfe, Inc. Oct. '54	Wilbur-Suchard Chocolate Company, Inc. 54
E. F. Drew Co., Inc..... Oct. '54	Norda Essential Oil and Chemical Company, Inc. Fourth Cover	
Durkee Famous Foods..... Nov. '54		

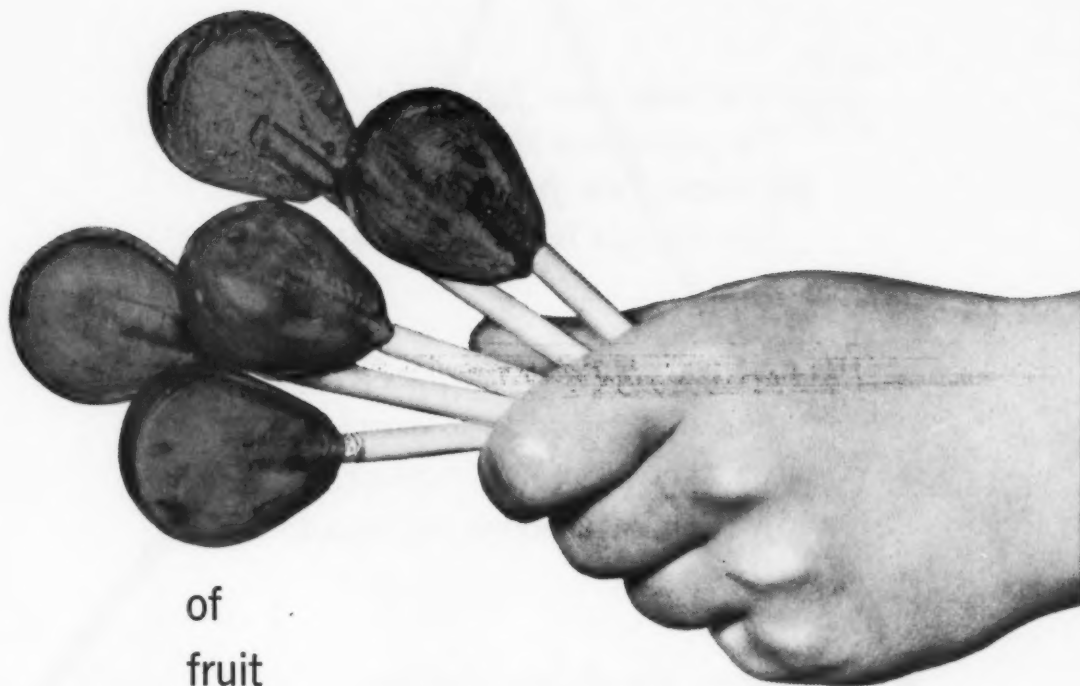
PRODUCTION MACHINERY AND EQUIPMENT

Bramigk & Co., Ltd..... Sept. '54	Hamilton Copper and Brass Works Nov. '54	Savage Bros. Co..... 53
Burrell Belting Co..... Nov. '54	Lehmann, J. M., Company, Inc. Nov. '54	Schutz-O'Neill Co. 63
Cincinnati Aluminum Mould Co. Nov. '54	Mikrovaerk, A. S..... Nov. '54	Sheffman, John, Inc. 3
Corrigan, J. C., Inc..... 52	Mill River Tool Co..... Nov. '54	Standard Casing Co., Inc., The... 52
Currie Machinery Company... Nov. '54	Niagara Blower Company... Nov. '54	Stehling, Chas., H., Co..... 60
Geveke and Co., Inc..... 46	Racine Confectioners' Machinery Co. 8	The Triumph Mfg. Co..... Sept. '54
Greer, J. W., Company..... Nov. '54		Vacuum Candy Machinery Co..... 8
Groen Mfg. Co..... Oct. '54		Voss Belting & Specialty Co..... 35

PACKAGING SUPPLIES AND EQUIPMENT

Amsco Packaging Machinery, Inc. Oct. '54	The Foxon Company..... Oct. '54	Package Machinery Co..... Oct. '54
Atlantic Plastics Co., Inc..... Oct. '54	N. T. Gates Company..... 45	Peters Machinery Co..... Nov. '54
Battle Creek Packaging Machines, Inc. Oct. '54	Heekin Can Co., The..... Oct. '54	Rhineland Paper Company..... 42
Champion Bag Company..... 44	Hinde & Dauch..... Sept. '54	Riegel Paper Corporation..... 28
Cooper Paper Box Corporation... 40	Hudson-Sharp Machine Co..... 43	Stokes & Smith Co. 29
Daniels Manufacturing Co..... 33	I. D. Company..... Oct. '54	Sweetnam, George H., Co..... 36
Diamond "Cellophane" Products... 64	Ideal Wrapping Machine Company 42	Taft, R. C., Co..... 45
Dixie Wax Paper Co..... Oct. '54	Kiwi Coders Corp..... 45	Tompkins' Label Service..... Oct. '54
Doughboy Industries, Inc..... 41	Lynch Corporation, Packaging Machine Division 34	Triangle Packaging Machinery Co. Nov. '54
Dow Chemical Co., The..... 30	Milprint, Inc. Nov. '54	Visking Corporation..... Oct. '54
Exact Weight Scale Company... 38		The Woodman Company, Inc. Oct. '54

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